


**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐

<b>APPLICATION FOR PERMIT TO DRILL</b>				<b>1. WELL NAME and NUMBER</b> NBU 921-20B		
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES		
<b>4. TYPE OF WELL</b> Gas Well Coalbed Methane Well: NO				<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES		
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.				<b>7. OPERATOR PHONE</b> 720 929-6587		
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217				<b>9. OPERATOR E-MAIL</b> mary.mondragon@anadarko.com		
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU 0575		<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b> Ute Tribe		<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>
<b>LOCATION AT SURFACE</b>	716 FNL 2122 FEL	NWNE	20	9.0 S	21.0 E	S
<b>Top of Uppermost Producing Zone</b>	716 FNL 2122 FEL	NWNE	20	9.0 S	21.0 E	S
<b>At Total Depth</b>	716 FNL 2122 FEL	NWNE	20	9.0 S	21.0 E	S
<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 716		<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 1600		
		<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 800		<b>26. PROPOSED DEPTH</b> MD: 10300 TVD: 10300		
<b>27. ELEVATION - GROUND LEVEL</b> 4881		<b>28. BOND NUMBER</b>		<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> Permit #43-8496		

**ATTACHMENTS****VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES**

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP
<b>NAME</b> Danielle Piernot	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b>	<b>PHONE</b> 720 929-6156
	<b>DATE</b> 09/22/2009
	<b>EMAIL</b> danielle.piernot@anadarko.com
<b>API NUMBER ASSIGNED</b> 43047507150000	<b>APPROVAL</b>  Permit Manager



Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	10300		
Pipe	Grade	Length	Weight			
	Grade HCP-110 LT&C	700	11.6			
	Grade I-80 Buttress	9600	11.6			



Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	9.625	0	2700		
Pipe	Grade	Length	Weight			
	Grade J-55 LT&C	2700	36.0			



# T9S, R21E, S.L.B.&M.

Found 2006  
Aluminum Cap in  
Pile of Stones

N89°58.7'W - 39.921 (G.L.O.)  
N89°54'13"W - 2634.82' (Meas.)

N89°57.5'W - 40.129 (G.L.O.)  
N89°53'24"W - 2648.44' (Meas.)

Found 2006  
Aluminum Cap  
with Set Stone  
North of Cap

N00°03'14"W - 2657.29' (Meas.)  
N0°08.0'W - 80.522 (G.L.O.)  
N00°03'21"W - 2657.24' (Meas.)

Found 2006  
Aluminum Cap in  
Pile of Stones

Found 2006  
Aluminum Cap in  
Pile of Stones

Proposed Well

716'

2122'

**WELL LOCATION:  
NBU 921-20B**

ELEV. UNGRADED GROUND = 4880.9'

**20**

NBU 921-20B (Proposed Well Head)  
NAD 83 LATITUDE = 40.026870° (40° 01' 36.730")  
LONGITUDE = 109.573746° (109° 34' 25.484")  
NAD 27 LATITUDE = 40.026905° (40° 01' 36.858")  
LONGITUDE = 109.573056° (109° 34' 23.002")

N00°00'48"W (Basis of Bearings)  
2668.44' (Measured)  
N0°04.6'W - 40.429 (G.L.O.)

Found 2006  
Aluminum Cap in  
Pile of Stones

N00°02'18"E - 2636.94' (Meas.)  
N0°01.7'W - 39.953 (G.L.O.)

Found 2006  
Aluminum Cap in  
Pile of Stones,  
Under E-W Fence

Found 2006  
Aluminum Cap in  
Pile of Stones  
under E-W Fence

N89°54'43"W - 2640.77' (Meas.)  
N89°59.4'W - 40.011 (G.L.O.)

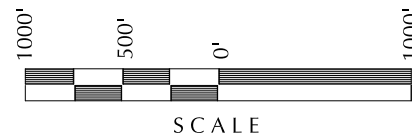
Found 2006  
Aluminum Cap in  
Pile of Stones  
under E-W Fence

S89°55'12"W - 2636.26' (Meas.)  
S89°51.2'W - 39.942 (G.L.O.)

## NOTES:

▲ = Section Corners Located

- Well footages are measured at right angles to the Section Lines.
- G.L.O. distances are shown in feet or chains.  
1 chain = 66 feet.
- Bearings are based on Global Positioning Satellite observations.
- Basis of elevation is Tri-Sta "Two Water" located in the NW  $\frac{1}{4}$  of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.



## SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
REGISTRATION No. 362251  
STATE OF UTAH

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 921-20B**

**NBU 921-20B  
WELL PLAT  
716' FNL, 2122' FEL  
NW  $\frac{1}{4}$  NE  $\frac{1}{4}$  OF SECTION 20, T9S, R21E,  
S.L.B.&M., UTAH COUNTY, UTAH.**



**609 CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

**TIMBERLINE**

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 04-13-09	SURVEYED BY: M.S.B.	SHEET NO: <b>1</b> 1 OF 9
DATE DRAWN: 04-14-09	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'	Date Last Revised:	



**NBU 921-20B**

Surface: 716' FNL 2,122' FEL (NW/4NE/4)  
Sec. 20 T9S R21E

Uintah, Utah  
Mineral Lease: UTU 0575

**ONSHORE ORDER NO. 1**

***DRILLING PROGRAM***

1. – 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 – Surface	
Green River	1,713'	
Birds Nest	2,001'	Water
Mahogany	2,495'	Water
Wasatch	5,078'	Gas
Mesaverde	8,099'	Gas
MVU2	9,056'	Gas
MVL1	9,619'	Gas
TD	10,300'	

3. **Pressure Control Equipment** (Schematic Attached)

*Please refer to the attached Drilling Program.*

4. **Proposed Casing & Cementing Program:**

*Please refer to the attached Drilling Program.*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program.*



**7. Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 10,300' TD, approximately equals 6,417 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 4,151 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

**8. Anticipated Starting Dates:**

*Drilling is planned to commence immediately upon approval of this application.*

**9. Variances:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

*Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2*

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

*This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.*

*The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.*

*More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.*

***Background***

*In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.*

*Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found*



*competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.*

*The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.*

*KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.*

#### ***Variance for BOPE Requirements***

*The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.*

#### ***Variance for Mud Material Requirements***

*Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.*

#### ***Variance for Special Drilling Operation (surface equipment placement) Requirements***

*Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.*

*Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.*

*Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see*



*attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.*

*Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.*

***Variance for FIT Requirements***

*KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). The air rig operation utilizes a 5M BOPE when drilling. This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.*

***Conclusion***

*The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.*

**10. Other Information:**

*Please refer to the attached Drilling Program.*





**KERR-McGEE OIL & GAS ONSHORE LP**  
**DRILLING PROGRAM**

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP				DATE	September 3, 2009			
WELL NAME	<b>NBU 921-20B</b>				TD	10,300' MD/TVD			
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah		FINISHED ELEVATION	4,876'
SURFACE LOCATION	NW/4 NE/4	716' FNL	2,122' FEL	Sec 20	T 9S	R 21E	BHL		Straight Hole
	Latitude: 40.026870		Longitude: -109.573746		NAD 83				
OBJECTIVE ZONE(S)	Wasatch/Mesaverde								
ADDITIONAL INFO	Regulatory Agencies: BLM (MINERALS), Ute Tribe (SURFACE), UDOGM, Tri-County Health Dept.								

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
<p>All water flows encountered while drilling will be reported to the appropriate agencies.</p> <p>Green River @ 1,713'</p> <p>Top of Birds Nest Water @ 2,001'</p> <p>Mahogany @ 2,495'</p> <p>Preset f/ GL @ 2,700' MD</p> <p>Note: 12.25" surface hole will usually be drilled ±400' below the bottom of lost circulation zone. Drilled depth may be ±200' of the estimated set depth depending on the actual depth of the loss zone.</p> <p>Mud logging program TBD</p> <p>Open hole logging program from TD - surf csg</p> <p>Wasatch @ 5,078'</p> <p>Mverde @ 8,099'</p> <p>MVU2 @ 9,056'</p> <p>MVL1 @ 9,619'</p> <p>TD @ 10,300'</p>			12-1/4"	9-5/8", 36#, J-55, LTC	Air mist
			7-7/8"	4-1/2" 11.6# HCP-110 & I-80 or equivalent BTC/LTC casing	Water/Fresh Water Mud 8.3-12.2 ppg
				Max anticipated Mud required 12.2 ppg	





# KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

## CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,520	2,020	453,000
SURFACE	9-5/8"	0 to 2700	36.00	J-55	LTC	0.82*	1.60	4.66
						7,780	6,350	278,000
PRODUCTION	4-1/2"	0 to 9600	11.60	I-80	BTC	1.82	1.04	2.86
						10,690	8,650	279,000
		9600 to 10300	11.60	HCP-110	LTC	2.50	1.32	42.23

\*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.07

1) Max Anticipated Surf. Press.(MASP) (Surf Csg) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac grad x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.2 ppg)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MASP 4,151 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.2 ppg)

0.62 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MABHP 6,417 psi**

## CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
			+ 0.25 pps flocele				
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	380	0%	15.60	1.18
			+ 2% CaCl + 0.25 pps flocele				
			Premium cmt + 2% CaCl				
SURFACE		<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>					
Option 2	LEAD	2,200'	Prem cmt + 16% Gel + 10 pps gilsonite	250	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOC				
	TAIL	500	Premium cmt + 2% CaCl	180	35%	15.60	1.18
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	4,570'	Premium Lite II + 0.25 pps celloflake +	440	40%	11.00	3.38
			5 pps gilsonite + 10% gel '+' 1% Retarder				
	TAIL	5,730'	50/50 Poz/G + 10% salt + 2% gel	1400	40%	14.30	1.31
			+ 0.1% R-3				

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

## FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint for a total of 15 bow spring centralizers.

## ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

John Huycke / Emile Goodwin

DATE:

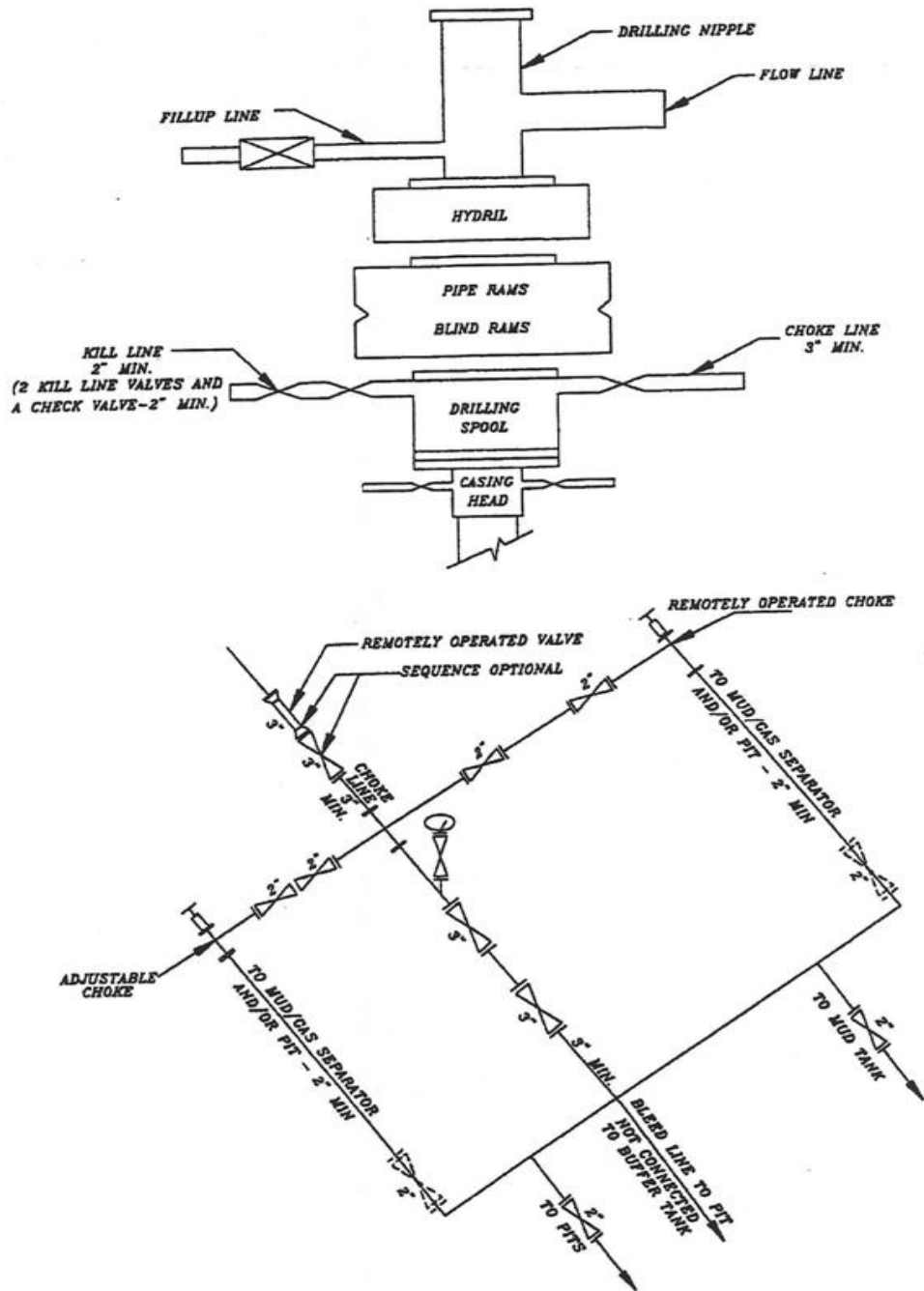
DRILLING SUPERINTENDENT:

John Merkel / Lovel Young

DATE:



# EXHIBIT A NBU 921-20B

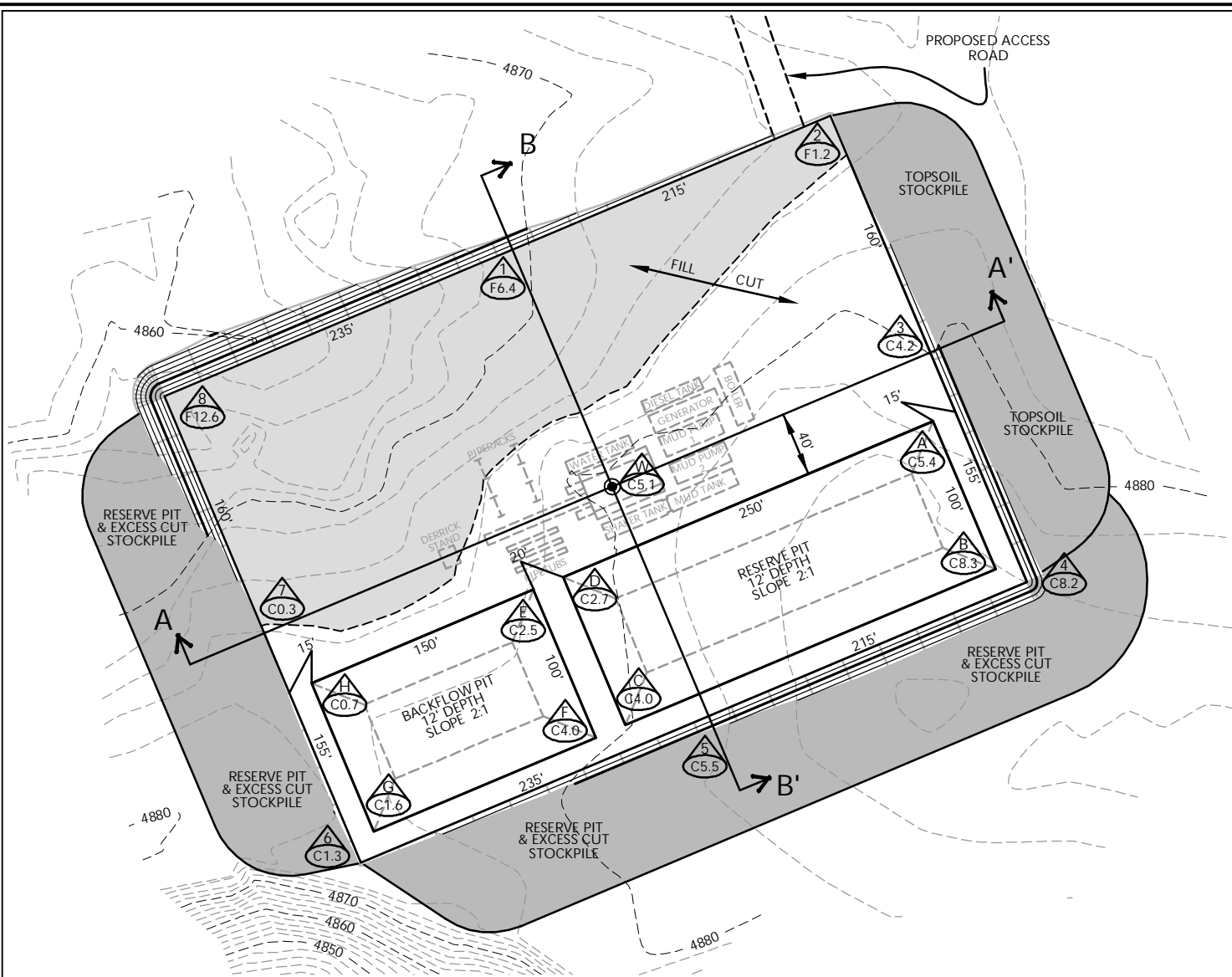


SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



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# WELL PAD LEGEND

- WELL LOCATION
- - - EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)

## WELL PAD NBU 921-20B QUANTITIES

EXISTING GRADE @ LOC. STAKE = 4880.9'  
 FINISHED GRADE ELEVATION = 4875.8'  
 CUT SLOPES = 1.5:1  
 FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 13,866 C.Y.  
 TOTAL FILL FOR WELL PAD = 13,505 C.Y.  
 TOPSOIL @ 6" DEPTH = 2,875 C.Y.  
 EXCESS MATERIAL = 361 C.Y.  
 TOTAL DISTURBANCE = 3.57 ACRES  
 SHRINKAGE FACTOR = 1.10  
 SWELL FACTOR = 1.00  
 RESERVE PIT CAPACITY (2' OF FREEBOARD)  
 +/- 28,730 BARRELS  
 RESERVE PIT VOLUME  
 +/- 7,720 CY  
 BACKFLOW PIT CAPACITY (2' OF FREEBOARD)  
 +/- 15,900 BARRELS  
 BACKFLOW PIT VOLUME  
 +/- 4,350 CY

Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-20B

WELL PAD - LOCATION LAYOUT

NBU 921-20B

716' FNL, 2122' FEL

NW1/4 NE1/4 OF SECTION 20, T.9S., R.21E.

S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC  
 371 Coffeen Avenue  
 Sheridan WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

Scale: 1"=100'

Date: 4/17/09

SHEET NO:

2

2 OF 9

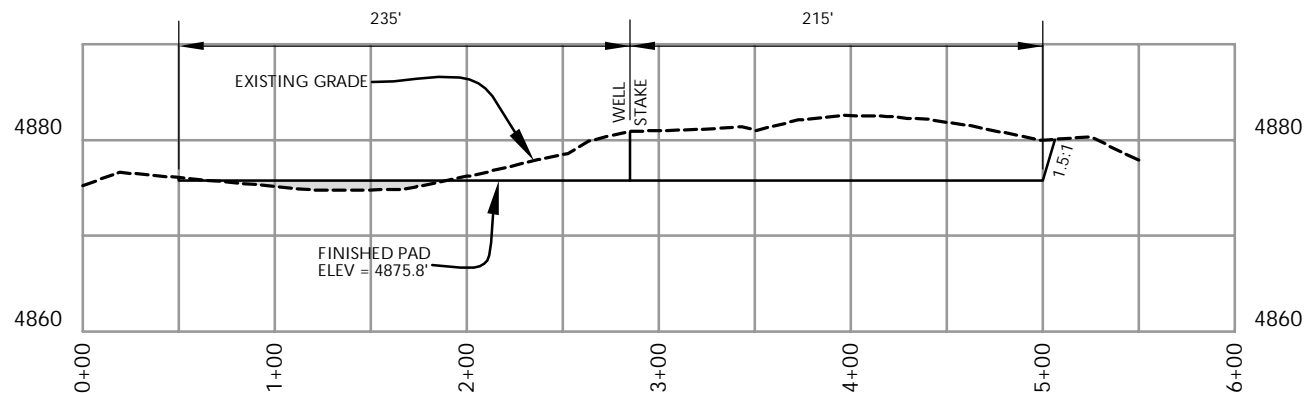
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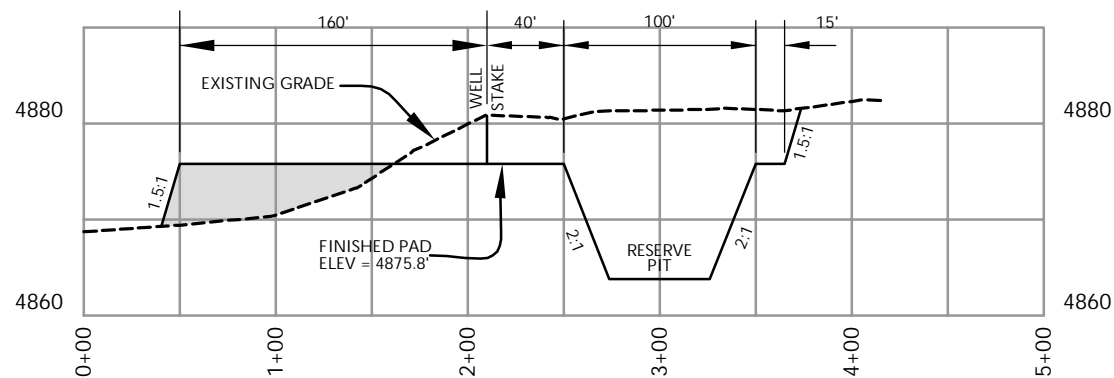
HORIZONTAL 0 50 100 1" = 100'  
 2' CONTOURS

**TIMBERLINE** (435) 789-1365  
**ENGINEERING & LAND SURVEYING, INC.**  
 209 NORTH 300 WEST - VERNAL, UTAH 84078





**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

**Kerr-McGee Oil & Gas Onshore, LP**

1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 921-20B**

**WELL PAD - CROSS SECTIONS**

**NBU 921-20B**

**716' FNL, 2122' FEL**

**NW1/4 NE1/4 OF SECTION 20, T.9S., R.21E.**

**S.L.B.&M., UINTAH COUNTY, UTAH**



**CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

Scale: 1"=100'

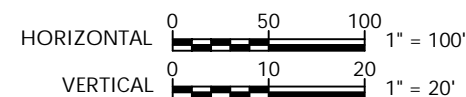
Date: 4/17/09

SHEET NO:

**3**

3 OF 9

REVISED:



**TIMBERLINE**  
**ENGINEERING & LAND SURVEYING, INC.**  
209 NORTH 300 WEST - VERNAL, UTAH 84078

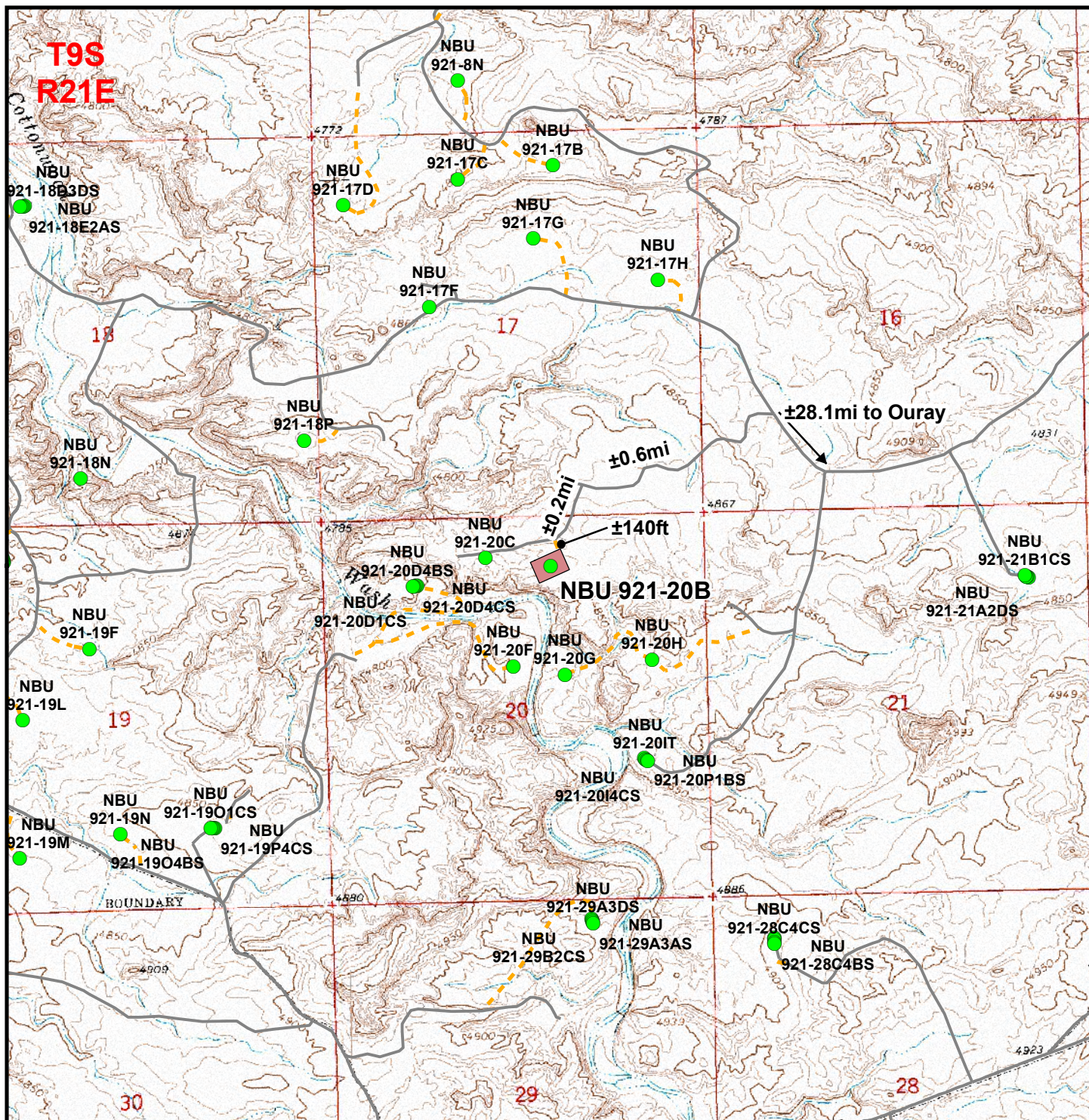
(435) 789-1365



'APIWellNo:43047507150000'







### Legend

- Well - Proposed
- Well Pad
- Road - Proposed
- Road - Existing

Total Proposed Road Length: ±140ft

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**Well Pad - NBU 921-20B**

**NBU 921-20B**

**Topo B**

**716' FNL, 2122' FEL**

**NW¼ NE¼, Section 20, T9S, R21E**

**S.L.B.&M., Uintah County, Utah**



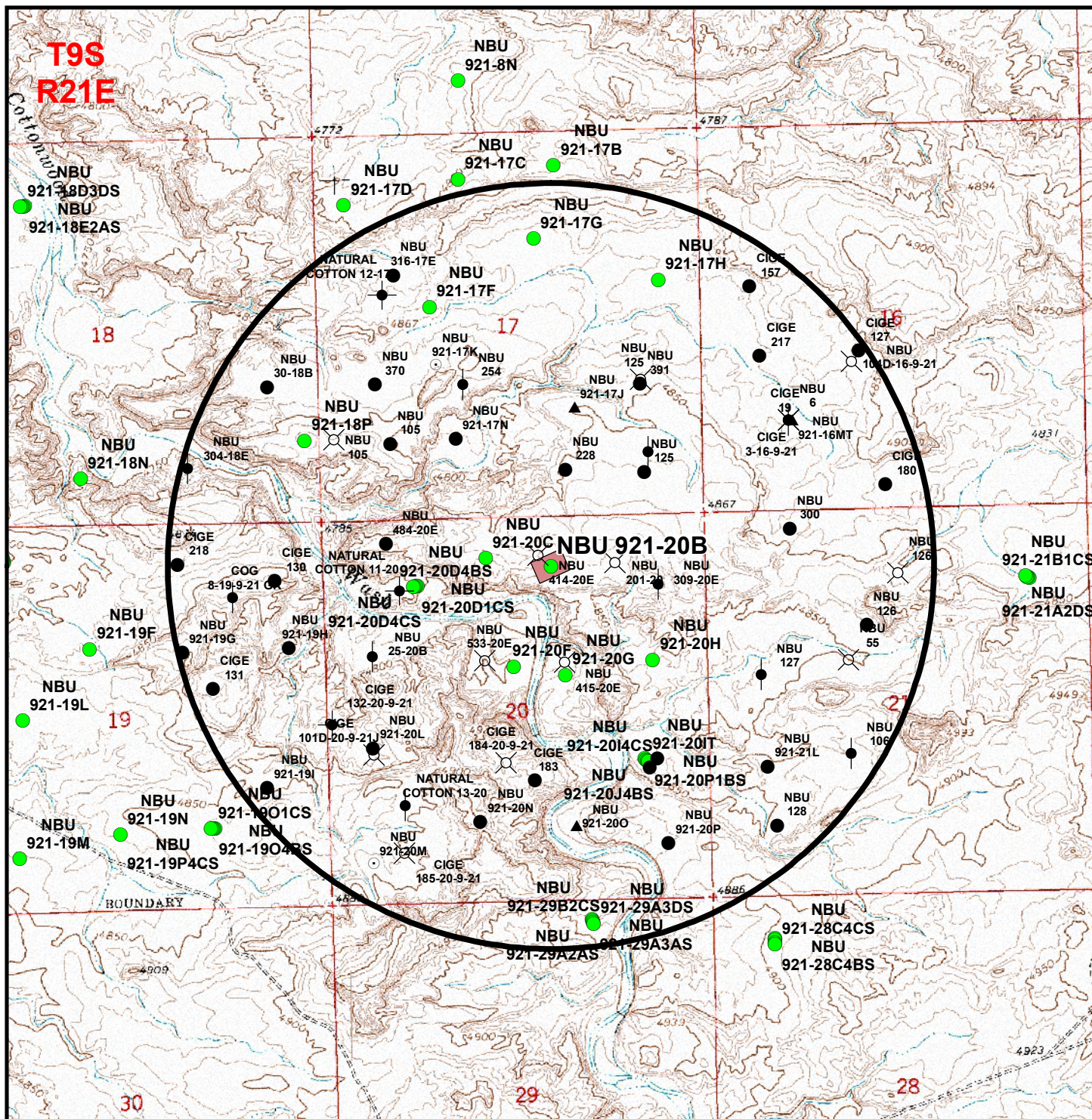
Scale: 1" = 2000ft	NAD83 USP Central
Drawn: JELO	Date: 13 April 2009
Revised:	Date:

Sheet No:

**6**

6 of 9





### Legend

- Well - Proposed
- Well - 1 Mile Radius
- Producing
- ▲ Approved permit (APD); not yet spudded
- Spudded (Drilling commenced: Not yet complete)
- ✕ Location Abandoned
- Shut-In
- Well Pad
- Temporarily-Abandoned
- Plugged and Abandoned

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**Well Pad - NBU 921-20B**

**NBU 921-20B**

**Topo C**

**716' FNL, 2122' FEL**

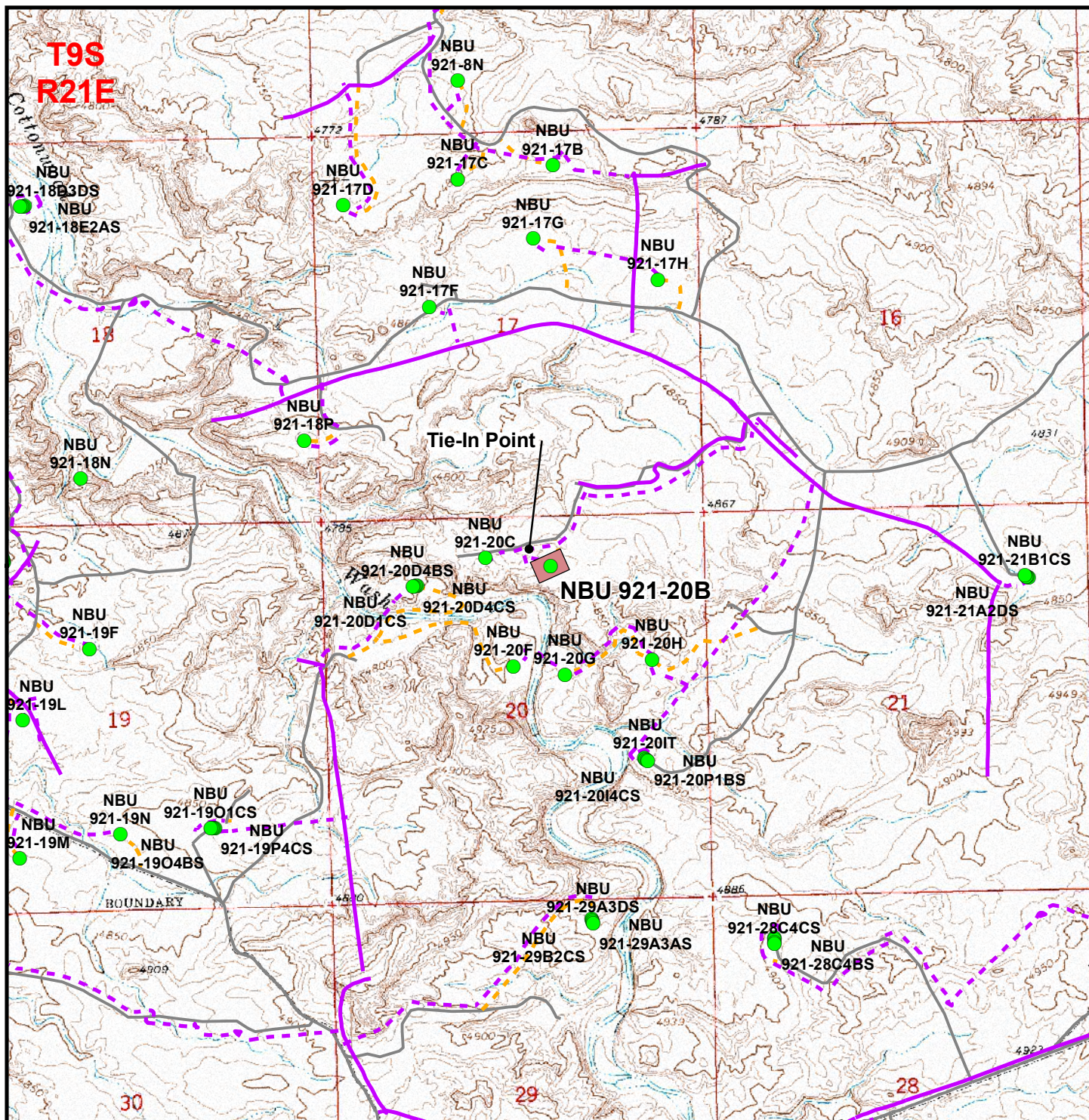
**NW¼ NE¼, Section 20, T9S, R21E**

**S.L.B.&M., Uintah County, Utah**



Scale: 1" = 2000ft	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 13 April 2009	<b>7</b>
Revised:	Date:	7 of 9





### Legend

- Well - Proposed
- Well Pad
- Pipeline - Proposed
- Road - Proposed
- Pipeline - Existing
- Road - Existing

Proposed Pipeline Length From Tie-In Point To Edge Of Pad:  $\pm 230\text{ft}$   
 Proposed Pipeline Length Around Pad:  $\pm 660\text{ft}$

**Kerr-McGee Oil & Gas Onshore, LP**  
 1099 18th Street, Denver, Colorado 80202

**Well Pad - NBU 921-20B**

**NBU 921-20B**

**Topo D**

**716' FNL, 2122' FEL**

**NW¼ NE¼, Section 20, T9S, R21E**

**S.L.B.&M., Uintah County, Utah**



Scale: 1" = 2000ft	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 13 April 2009	<b>8</b>
Revised:	Date:	8 of 9



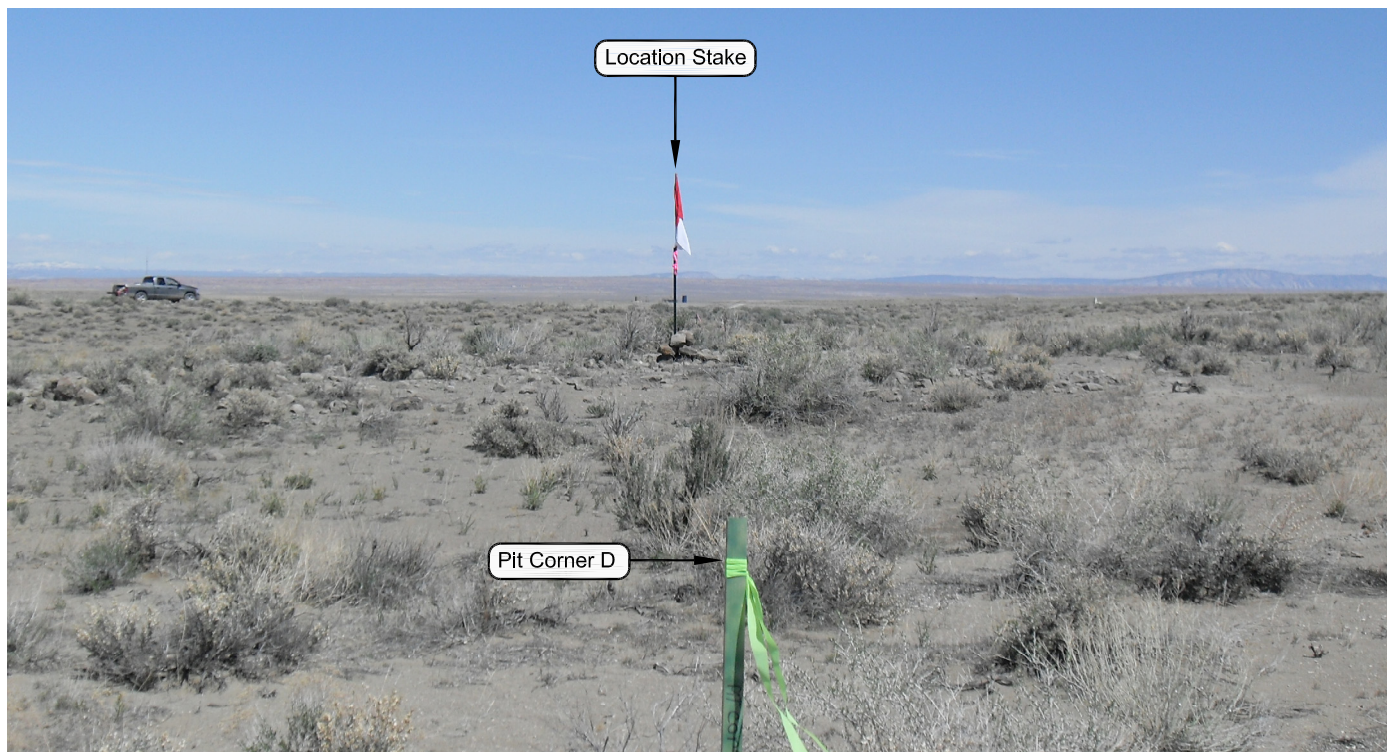


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY

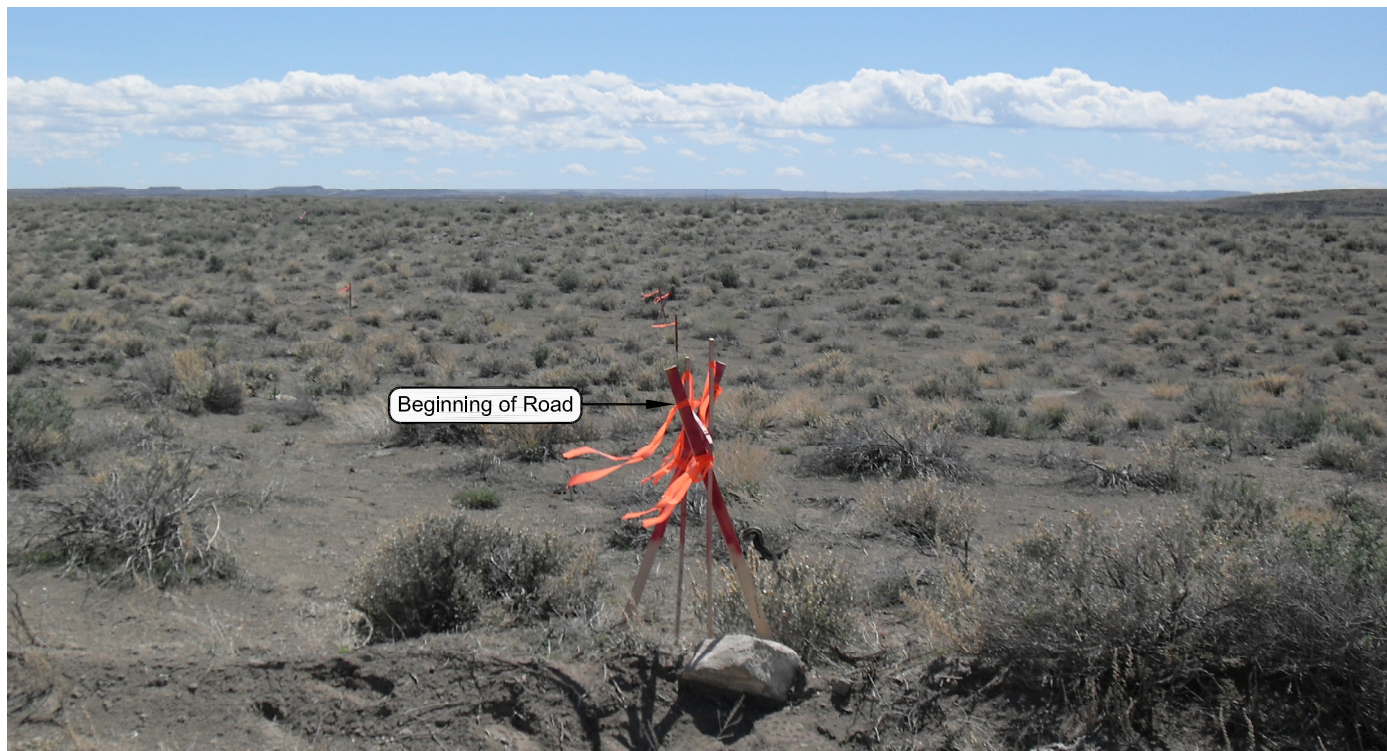


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: SOUTHEASTERLY

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**Well Pad - NBU 921-20B**

**NBU 921-20B  
LOCATION PHOTOS  
716' FNL, 2122' FEL  
NW  $\frac{1}{4}$  NE  $\frac{1}{4}$  OF SECTION 20, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH.**



**CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

**TIMBERLINE**

(435) 789-1365

**ENGINEERING & LAND SURVEYING, INC.**  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 04-13-09	PHOTOS TAKEN BY: M.S.B.	<b>4</b> 4 OF 9
DATE DRAWN: 04-14-09	DRAWN BY: M.W.W.	
Date Last Revised:		



**Kerr-McGee Oil & Gas Onshore, LP**  
**WELL PAD - NBU 921-20B**  
**WELL – NBU 921-20B**  
**Section 20, T9S, R21E, S.L.B.&M.**

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 11.2 MILES TO THE INTERSECTION OF THE GLEN BENCH ROAD (COUNTY B ROAD 3260). EXIT LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY, THEN NORTHEASTERLY DIRECTION ALONG THE GLEN BENCH ROAD APPROXIMATELY 11.4 MILES TO A CLASS D COUNTY ROAD TO THE SOUTHWEST. EXIT LEFT AND PROCEED IN A SOUTHWESTERLY DIRECTION ALONG THE CLASS D COUNTY ROAD APPROXIMATELY 1.8 MILES TO A SECOND CLASS D COUNTY ROAD TO THE NORTH. EXIT RIGHT AND PROCEED IN A NORTH BY NORTHWEST DIRECTION ALONG THE SECOND CLASS D COUNTY ROAD APPROXIMATELY 0.3 MILES TO A THIRD CLASS D COUNTY ROAD TO THE NORTH. EXIT RIGHT AND PROCEED IN A NORTHERLY, THEN NORTHEASTERLY, THEN NORTHERLY DIRECTION ALONG THE THIRD CLASS D COUNTY ROAD APPROXIMATELY 2.0 MILES TO A SERVICE ROAD TO THE SOUTHWEST. EXIT LEFT AND PROCEED IN A SOUTHWESTERLY, THEN NORTHWESTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 1.4 MILES TO A SECOND SERVICE ROAD TO THE SOUTHWEST. EXIT LEFT AND PROCEED IN A SOUTHWESTERLY DIRECTION APPROXIMATELY 0.6 MILES TO A THIRD SERVICE ROAD TO THE SOUTHWEST. EXIT LEFT AND PROCEED IN A SOUTHWESTERLY DIRECTION ALONG THE THIRD SERVICE ROAD APPROXIMATELY 0.2 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN A SOUTHERLY DIRECTION APPROXIMATELY 140 FEET TO THE PROPOSED WELL LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 59.6 MILES IN A SOUTHERLY DIRECTION.



**NBU 921-20B**

Surface: 716' FNL 2,122' FEL (NW/4NE/4)  
Sec. 20 T9S R21E

Uintah, Utah  
Mineral Lease: UTU 0575

Surface Owner: Ute Indian Tribe

**ONSHORE ORDER NO. 1**

***MULTI-POINT SURFACE USE & OPERATIONS PLAN  
SUBMITTED WITH SITE-SPECIFIC INFORMATION***

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA) documents. An NOS was submitted showing the surface location in NW/4 NE/4 of Section 20 T9S R21E.

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information is to be incorporated by reference into the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee). The MDP is available upon request from the BIA-Ft Duchesne Office.

An on-site meeting is scheduled for September 1-3, 2009. Please contact Raleen White at 720-929-6666 for any questions.

**A. Existing Roads:**

- A) Refer to Topo Map A for directions to the location.
- B) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

**B. Planned Access Roads:**

*See MDP for additional details on road construction.*

Approximately  $\pm 140'$  ( $\pm 0.03$  miles) of new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

*Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site and are typically shown on the attached Exhibits and Topo maps.*

**C. Location of Existing Wells Within a 1-Mile Radius:**

Please refer to Topo Map C.



**D. Location of Existing and Proposed Facilities:**

*See MDP for additional details on Existing and Proposed Facilities.*

*The following guidelines will apply if the well is productive.*

Approximately  $\pm 890'$  ( $\pm 0.17$  miles) of new pipeline is proposed for this well. Another  $\pm 4,200'$  ( $\pm 0.8$  miles) of new pipeline is proposed for a concurrent pipeline to the NBU 921-20C proposed well. Please refer to the attached Topo Map D. Appropriate surface use agreements have been or will be obtained from the Ute Indian Tribe. Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place

**E. Location and Type of Water Supply:**

*See MDP for additional details on Location and Type of Water Supply.*

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

No water well is to be drilled on this lease.

**F. Source of Construction Materials:**

*See MDP for additional details on Source of Construction Materials.*

**G. Methods of Handling Waste Materials:**

*See MDP for additional details on Methods of Handling Waste Materials.*

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E  
NBU #159 in Sec. 35 T9S R21E  
Ace Oilfield in Sec. 2 T6S R20E  
MC&MC in Sec. 12 T6S R19E  
Pipeline Facility in Sec. 36 T9S R20E  
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E  
Bonanza Evaporation Pond in Sec. 2 T10S R23E

**H. Ancillary Facilities:**

*See MDP for additional details on Ancillary Facilities.*

None are anticipated.

**I. Well Site Layout: (See Location Layout Diagram)**

*See MDP for additional details on Well Site Layout.*

All pits will be fenced according to the following minimum standards:



- Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

**J. Plans for Reclamation of the Surface:**

*See MDP for additional details on Plans for Reclamation of the Surface.*

Kerr-McGee shall call the BIA for the seed mixture prior to starting interim and/or final reclamation actions.

**K. Surface/Mineral Ownership:**

The well pad and access road are located on lands owned by:

Ute Indian Tribe  
PO Box 70  
Fort Duchesne, Utah 84026  
435-722-5141

The mineral ownership is listed below:

United States of America  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078  
435-781-4400

**L. Other Information:**

*See MDP for additional details on Other Information.*



**M. Lessee's or Operators' Representative & Certification:**

Kathy Schneebeck Dulnoan  
Regulatory Analyst  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6007

Tommy Thompson  
General Manager, Drilling  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6724


Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

  
Kathy Schneebeck Dulnoan

September 3, 2009  
Date



CLASS I REVIEW OF KERR-MCGEE OIL & GAS  
ONSHORE LP'S 51 PROPOSED WELL LOCATIONS  
(T9S, R21E, SECTIONS 7, 8, 10, 11, 12,  
17, 18, 19, 20, 23, 25, AND 30)  
IN Uintah COUNTY, UTAH

By:

Jacki A. Montgomery

Prepared For:

Ute Tribal Land  
Uintah and Ouray Agency

Bureau of Land Management  
Vernal Field Office

Prepared Under Contract With:

Kerr-McGee Oil & Gas Onshore LP  
1368 South 1200 East  
Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc.  
P.O. Box 219  
Moab, Utah 84532

MOAC Report No. 09-39

May 11, 2009

United States Department of Interior (FLPMA)  
Permit No. 09-UT-60122

Public Lands Policy Coordination Office  
Archaeological Survey Permit No. 117

Ute Tribal Permit No. A09-363



**IPC #09-75**

# **Paleontological Reconnaissance Survey Report**

---

**Survey of Kerr McGee's Proposed Well Pads, Access Roads &  
Pipelines for "NBU #921-8N, 17G & H, 20B, C & G"  
(Sec. 8, 16, 17 & 20, T 9 S, R 21 E)**

Ouray SE  
Topographic Quadrangle  
Uintah County, Utah

June 10, 2009

Prepared by Stephen D. Sandau  
Paleontologist for  
Intermountain Paleo-Consulting  
P. O. Box 1125  
Vernal, Utah 84078





# Grasslands Consulting, Inc.

4800 Happy Canyon Road, Suite 110, Denver, CO 80237

(303) 759-5377 Office (303) 759-5324 Fax

## **SPECIAL STATUS PLANT AND WILDLIFE SPECIES REPORT**

**Report #:** GCI #63

**Operator:** Kerr-McGee Oil & Gas Onshore LP

**Wells:** NBU 921-20B, NBU 921-20C, NBU 921-20H

**Pipelines:** Associated pipelines to proposed well pads

**Access Roads:** Associated access roads to proposed well pads

**Location:** Section 20, Township 9 South, Range 21 East; Uintah County, Utah

**Survey-Species:** Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*) and nesting raptors

**Date:** 06/23/2009 and 06/24/2009

**Observer(s):** Grasslands Consulting, Inc. Biologists: Dan Hamilton, Jay Slocum, Matt Kelahan, and Jonathan Sexauer. Technician: Chad Johnson

**Weather:** Partly cloudy, 60-90°F, 0-10 mph winds with no precipitation.



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:  
3160  
(UT-922)

September 4, 2009

### Memorandum

To: Assistant District Manager Minerals, Vernal District  
From: Michael Coulthard, Petroleum Engineer  
Subject: 2009 Plan of Development Natural Buttes Unit  
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
-------	-----------	----------

(Proposed PZ WASATCH-MESA VERDE)

43-047-50710	NBU 921-19L Sec 19 T09S R21E 2636 FSL 1534 FWL	
43-047-50711	NBU 921-19M Sec 19 T09S R21E 0735 FSL 1426 FWL	
43-047-50712	NBU 921-19N Sec 19 T09S R21E 1023 FSL 2822 FWL	
43-047-50715	NBU 921-20B Sec 20 T09S R21E 0716 FNL 2122 FEL	
43-047-50717	NBU 921-20C Sec 20 T09S R21E 0588 FNL 2261 FWL	

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit  
Division of Oil Gas and Mining  
Central Files  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:9-4-09



API Number: 4304750715

Well Name: NBU 921-20B

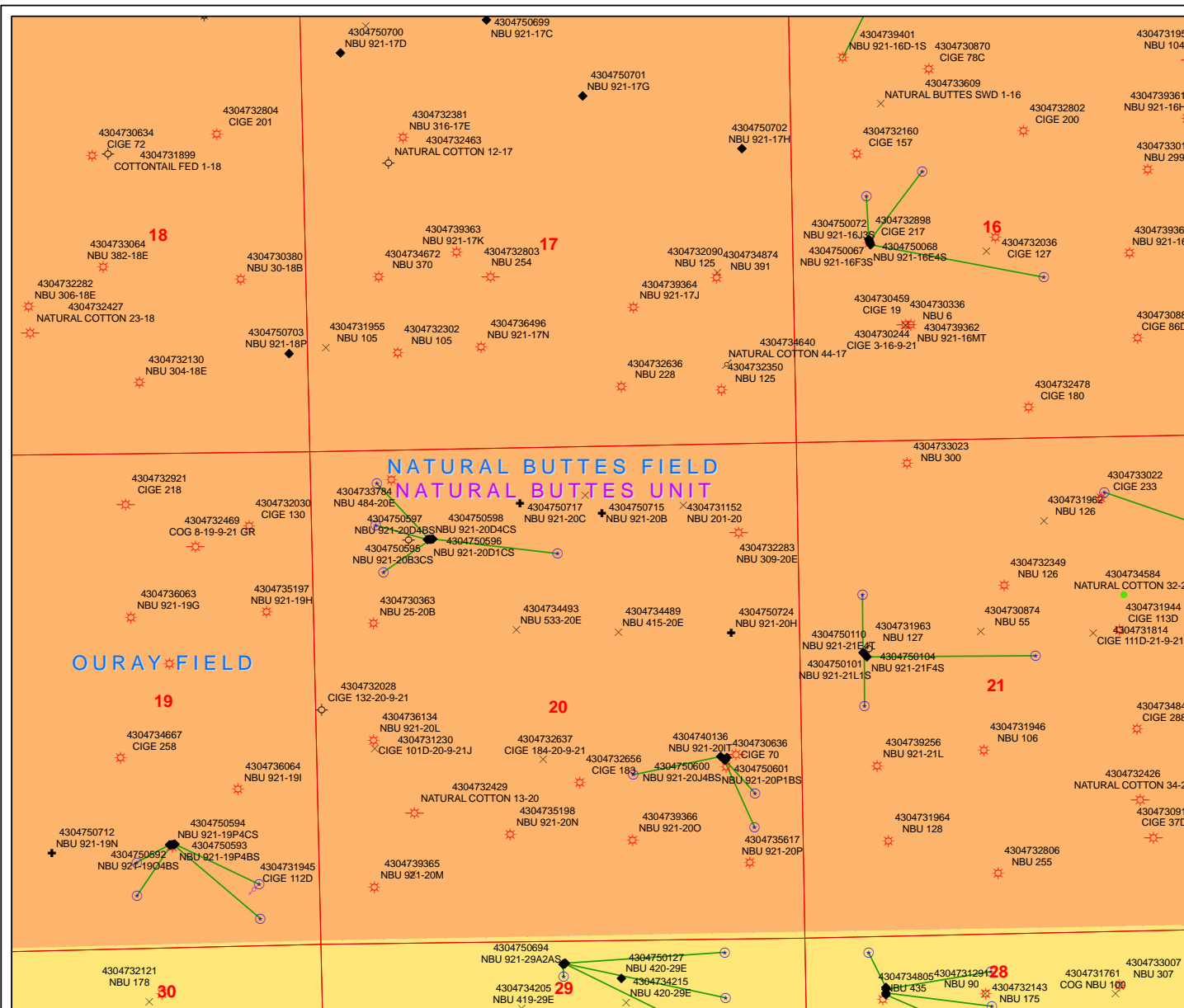
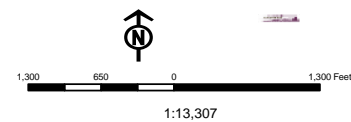
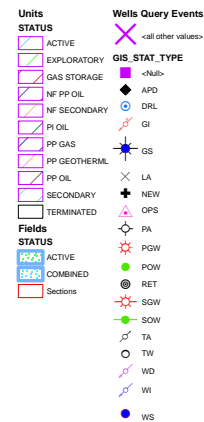
Township 09.0 S Range 21.0 E Section 20

Meridian: SLBM

Operator: KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.

Map Prepared:

Map Produced by Diana Mason





# WORKSHEET

## APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 9/3/2009

**API NO. ASSIGNED:** 43047507150000

**WELL NAME:** NBU 921-20B

**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)

**PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

**PROPOSED LOCATION:** NWNE 20 090S 210E

**Permit Tech Review:** ☒

**SURFACE:** 0716 FNL 2122 FEL

**Engineering Review:** ☒

**BOTTOM:** 0716 FNL 2122 FEL

**Geology Review:** ☒

**COUNTY:** UINTAH

**LATITUDE:** 40.02679

**LONGITUDE:** -109.57305

**UTM SURF EASTINGS:** 621761.00

**NORTHINGS:** 4431496.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 1 - Federal

**LEASE NUMBER:** UTU 0575

**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE

**SURFACE OWNER:** 2 - Indian

**COALBED METHANE:** NO

### RECEIVED AND/OR REVIEWED:

☒ **PLAT**

☒ **Bond:** FEDERAL - WYB000291

☐ **Potash**

☒ **Oil Shale 190-5**

☐ **Oil Shale 190-3**

☐ **Oil Shale 190-13**

☒ **Water Permit:** Permit #43-8496

☐ **RDCC Review:**

☐ **Fee Surface Agreement**

☒ **Intent to Commingle**

**Commingle Approved**

### LOCATION AND SITING:

☐ **R649-2-3.**

**Unit:** NATURAL BUTTES

☐ **R649-3-2. General**

☐ **R649-3-3. Exception**

☒ **Drilling Unit**

**Board Cause No:** Cause 173-14

**Effective Date:** 12/2/1999

**Siting:** 460' fr u bdry & uncomm. tract

☐ **R649-3-11. Directional Drill**

**Comments:** Presite Completed

**Stipulations:** 3 - Commingle - ddoucet  
4 - Federal Approval - dmason  
17 - Oil Shale 190-5(b) - dmason





GARY R. HERBERT  
*Governor*

GREGORY S. BELL  
*Lieutenant Governor*

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

### Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

## Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 921-20B  
**API Well Number:** 43047507150000  
**Lease Number:** UTU 0575  
**Surface Owner:** INDIAN  
**Approval Date:** 9/22/2009

### Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

### Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

### Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

### Commingling:

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

### Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

### Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)



OR

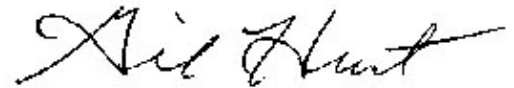
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <https://oilgas.ogm.utah.gov>

**Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

**Approved By:**

A handwritten signature in black ink, appearing to read "Gil Hunt", with a stylized, cursive script.

Gil Hunt  
Associate Director, Oil & Gas



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-20B
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0716 FNL 2122 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 20 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047507150000
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UTAH		<b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 9/21/2010  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: September 28, 2010

By:

<b>NAME (PLEASE PRINT)</b> Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A		<b>DATE</b> 9/20/2010





## The Utah Division of Oil, Gas, and Mining

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

### Request for Permit Extension Validation Well Number 43047507150000

**API:** 43047507150000

**Well Name:** NBU 921-20B

**Location:** 0716 FNL 2122 FEL QTR NWNE SEC 20 TWNP 090S RNG 210E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 9/21/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

**Signature:** Danielle Piernot

**Date:** 9/20/2010

**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date:** September 28, 2010

**By:** 

**RECEIVED** September 20, 2010



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>			
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575			
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr			
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-20B			
<b>4. LOCATION OF WELL FOOTAGES AT SURFACE:</b> 0716 FNL 2122 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 20 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047507150000			
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES			
<b>TYPE OF SUBMISSION</b>  <input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 8/22/2011  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<b>TYPE OF ACTION</b>  <table style="width: 100%; border: none;"> <tr> <td style="vertical-align: top; width: 33%;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </td> <td style="vertical-align: top; width: 33%;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </td> <td style="vertical-align: top; width: 33%;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input checked="" type="checkbox"/> <b>APD EXTENSION</b>          OTHER: <span style="border: 1px solid black; display: inline-block; width: 100px; height: 15px;"></span> </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> <b>APD EXTENSION</b> OTHER: <span style="border: 1px solid black; display: inline-block; width: 100px; height: 15px;"></span>
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<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b>  Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.					
<b>NAME (PLEASE PRINT)</b> Andy Lytle		<b>PHONE NUMBER</b> 720 929-6100			
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst			
<b>DATE</b> 8/22/2011		<b>APPROVED BY THE UTAH DIVISION OF OIL, GAS AND MINING</b>  <b>Date:</b> 08/22/2011 <b>By:</b>			





## The Utah Division of Oil, Gas, and Mining

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

### Request for Permit Extension Validation Well Number 43047507150000

**API:** 43047507150000

**Well Name:** NBU 921-20B

**Location:** 0716 FNL 2122 FEL QTR NWNE SEC 20 TWNP 090S RNG 210E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 9/21/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

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- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Signature:** Andy Lytle

**Date:** 8/22/2011

**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**RECEIVED** Aug. 22, 2011



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

SEP 03 2009  
mcFORM APPROVED  
OMB No. 1004-0136  
Expires July 31, 2010

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU0575
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERRMCGEE OIL&GAS ONSHORE LP Contact: DANIELLE E PIERNOT Email: Danielle.Piernot@anadarko.com		7. If Unit or CA Agreement, Name and No. 891008900A
3a. Address PO BOX 173779 DENVER, CO 80202-3779		8. Lease Name and Well No. NBU 921-20B
3b. Phone No. (include area code) Ph: 720-929-6156 Fx: 720-929-7156		9. API Well No. 43 047 50715
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWNE 716FNL 2122FEL 40.02687 N Lat, 109.57375 W Lon At proposed prod. zone NWNE 716FNL 2122FEL 40.02687 N Lat, 109.57375 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 29 MILES SOUTHEAST OF OURAY, UTAH		11. Sec., T., R., M., or Blk. and Survey or Area Sec 20 T9S R21E Mer SLB
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 716 FEET	16. No. of Acres in Lease 1600.00	12. County or Parish UINTAH
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. APPROXIMATELY 800 FEET	19. Proposed Depth 10300 MD 10300 TVD	13. State UT
21. Elevations (Show whether DF, KB, RT, GL, etc.) 4881 GL	22. Approximate date work will start 09/21/2009	17. Spacing Unit dedicated to this well
		20. BLM/BIA Bond No. on file WYB000291
		23. Estimated duration 60-90 DAYS

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature (Electronic Submission)	Name (Printed/Typed) DANIELLE E PIERNOT Ph: 720-929-6156	Date 09/03/2009
Title REGULATORY ANALYST		
Approved by (Signature) 	Name (Printed/Typed) Jerry Kenczka	Date NOV 16 2009
Title Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached

CONDITIONS OF APPROVAL ATTACHED

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

## Additional Operator Remarks (see next page)

Electronic Submission #73980 verified by the BLM Well Information System  
For KERRMCGEE OIL&GAS ONSHORE LP, sent to the Vernal  
Committed to AFMSS for processing by ROBIN R. HANSEN on 09/04/2009

NOTICE RECEIVED

NOV 21 2011

DIV. OF OIL, GAS &amp; MINING

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

UDOGM





UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE  
170 South 500 East VERNAL, UT 84078

(435) 781-4400



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL**

Company:	Kerr McGee Oil & Gas Onshore	Location:	NWNE, Sec. 20, T9S, R21E (S) NWNE, Sec. 20, T9S, R21E (B)
Well No:	NBU 921-20B	Lease No:	UTU-0575
API No:	43-047-50715	Agreement:	Natural Buttes Unit

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	- The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	- Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	- Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <a href="mailto:ut_vn_opreport@blm.gov">ut_vn_opreport@blm.gov</a> .
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	- Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.



***SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)***

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.

**SITE SPECIFIC COAs:**

- Paint facilities "Shadow Gray."
- Re-route storm water runoff around the perimeter of the well pad, as depicted on location layout.
- Construct low water crossing on access road.
- Monitor location by a permitted paleontologist during the construction process.
- Monitor location by a permitted archaeologist during the construction process.
- Fence of the archaeological site 42Un2138 prior to the construction operations.
- In accordance with the guidelines specified in the Utah BLM Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002 a raptor survey shall be conducted prior to construction of the proposed location, pipeline, or access road if construction would take place during raptor nesting season (January 1 through September 30). If active raptor nests are identified during a new survey, KMG shall conduct its operations according to the seasonal restrictions detailed I the Uinta Basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines (See Appendix D). The USFWS recommends a ¼-mile avoidance buffer surrounding active burrowing owl nests between March 1 and August 31. The USFWS recommends a ¼-mile avoidance buffer surrounding active golden eagle nests between January 1 and August 31.
- Conduct a new biological survey in accordance with the guidelines specified in the USFWS Rare Plant Conservation Measures for Uinta Basin hookless Cactus and the 2008 BLM RMP ROD, to include a 300-foot buffer from proposed construction operations (See Appendix D), and conduct operations according to agency specifications and the requirements of the BO issued as a result of Section & USFWS consultation.

**BIA Standard Conditions of Approval**

- Soil erosion will be mitigated by reseeding all disturbed areas.
- The gathering pipelines will be constructed to lie on the surface. The surface pipelines will not be bladed or cleared of vegetation. Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the right-of-way. Where pipelines do



not parallel roads but cross-country between sites, they shall be welded in place at well sites or on access roads and then pulled between stations with a suitable piece of equipment. Traffic will be restricted along these areas so that the pipeline right-of-way will not be used as an access road.

- An open drilling system shall be used, unless otherwise specified in 10.0 Additional Stipulations of this document and in the Application for Permit to Drill. A closed drilling system shall be used in all flood plain areas, and other highly sensitive areas, recommended by the Ute Tribe Technician, BIA, and other agencies involved.
- The reserve pit shall be lined with a synthetic leak proof liner. After the drilling operation is complete, excess fluids shall be removed from the reserve pit and either hauled to an approved disposal site or shall be used to drill other wells. When the fluids are removed the pit shall be backfilled a minimum of 3.0' below the soil surface elevation.
- A closed production system shall be used. This means all produced water and oil field fluid wastes shall be contained in leak proof tanks. These fluids shall be disposed of in either approved injection wells or disposal pits.
- Major low water crossings will be armored with pit run material to protect them from erosion.
- All personnel shall refrain from collecting any paleontological fossils and from disturbing any fossil resources in the area.
- If fossils are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.
- Before the site is abandoned the company will be required to restore the right-of-way to near its original state. The disturbed area will be reseeded with desirable perennial vegetation. If necessary, the Bureau of Indian Affairs or Bureau of Land Management will provide a suitable seed mixture.
- Noxious weeds will be controlled on all surface disturbances within the project area. If noxious weeds spread from the project area onto adjoining land, the company will also be responsible for their control.
- If project construction operations are scheduled to occur after December 31, 2009, KMG shall conduct annual raptor surveys in accordance with the guidelines specified in the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002. If active raptor nest are indentified during a new survey, KMG shall conduct its operations according to the seasonal restrictions detailed in the Uinta basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines (See Appendix D).
- USFWS threatened and endangered plant and animal conservation measures will be followed, as appropriate to the species identified by the biological resource survey (See Appendix D).
- All personnel shall refrain from collecting artifacts and from disturbing any significant cultural resources in the area.
- If artifacts or any culturally sensitive materials are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.



***DOWNHOLE PROGRAM  
CONDITIONS OF APPROVAL (COAs)***

**SITE SPECIFIC DOWNHOLE COAs:**

Gamma Ray Log shall be run from total depth to surface.

**Variances Granted:**

**Air Drilling**

Properly lubricated and maintained rotating head. Variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.

Blooie line discharge 100' from the well bore. Variance granted for blooie line discharge to be 45' from the well bore.

Variance granted for two truck/trailer mounted air compressors located with 40 feet from the well bore and 60' from the blooie line.

Mud material requirements. In lieu of mud products on location, Kerr McGee will fill the reserve pit with water for kill fluid.

Automatic igniter. Variance granted for igniter due to there being no productive formations while drilling with air.

FIT test. Variance granted due to well know geology and problems that can occur with FIT test.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.



- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.



## **OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at [www.ONRR.gov](http://www.ONRR.gov).
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.





































































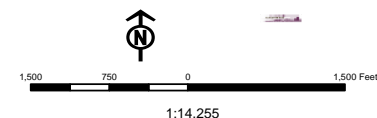
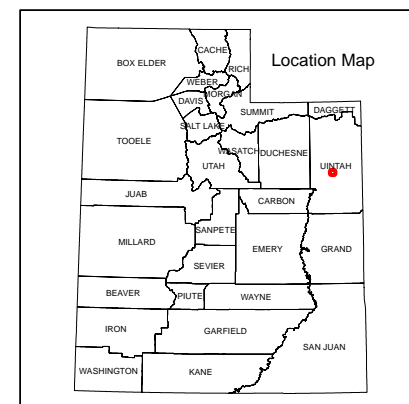
- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9			
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575			
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE			
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-20B			
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0758 FNL 2246 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 20 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047507150000			
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES			
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>				
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 8/1/2012  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<table style="width: 100%; border: none;"><tr><td style="width: 33%; vertical-align: top;"><input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION</td><td style="width: 33%; vertical-align: top;"><input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER</td><td style="width: 33%; vertical-align: top;"><input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100%;" type="text"/></td></tr></table>		<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100%;" type="text"/>
<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100%;" type="text"/>			
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests to change the surface hole location for this well. FROM: 716' FNL 2122' FEL TO: 758' FNL 2246' FEL This well will change from a vertical well to a directional well and will have additional wells added to the pad location. Please see the attached revised plats, SUPO and drilling program for additional information. Please contact the undersigned with any questions and/or comments. Thank you.					
<b>NAME (PLEASE PRINT)</b> Danielle Piernot		<b>PHONE NUMBER</b> 720 929-6156			
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst			
		<b>DATE</b> 7/26/2012			

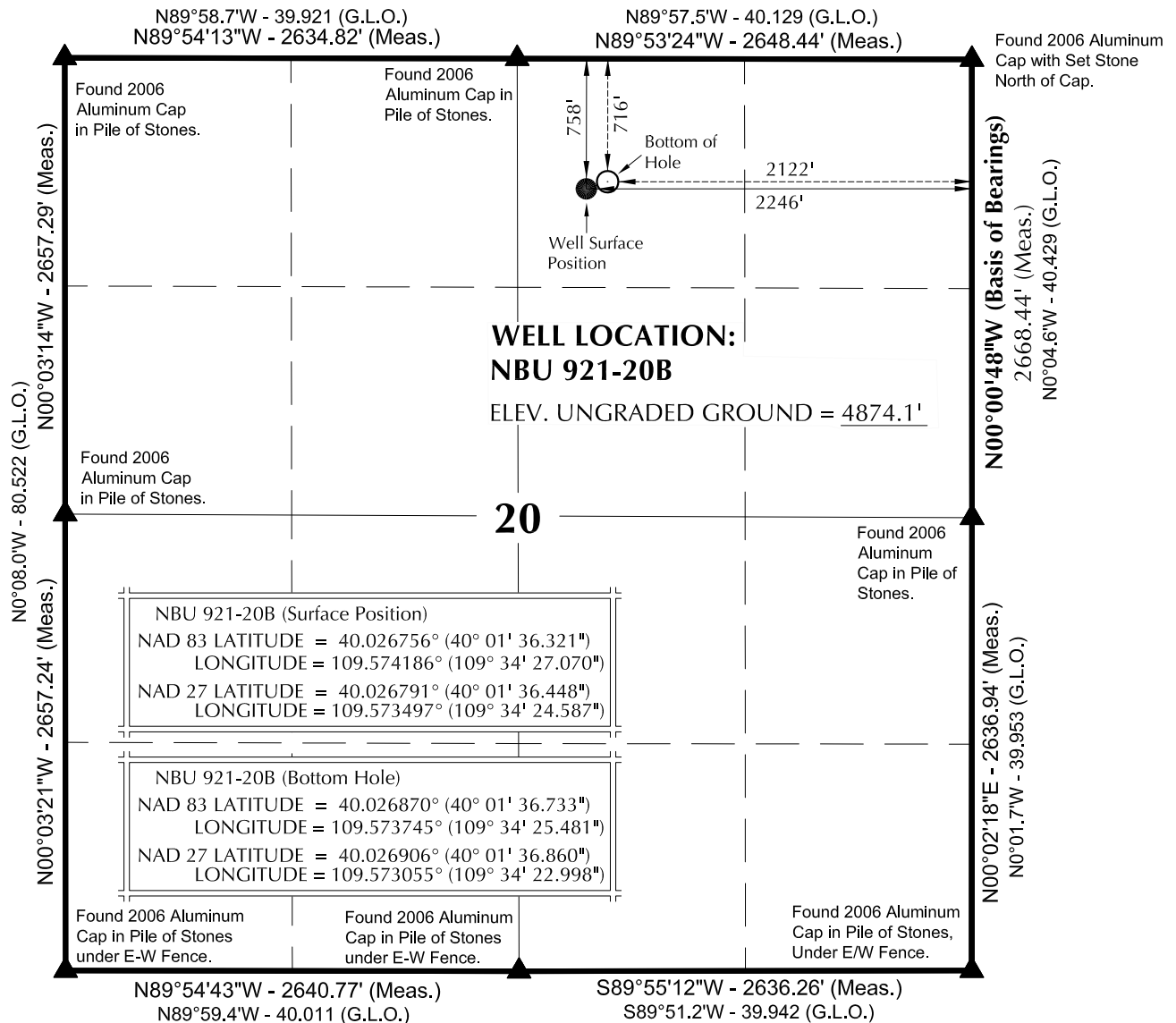


Units	Wells Query Status
	ACTIVE
	EXPLORATORY
	GAS STORAGE
	NF GAS
	NF SECONDARY
	PI OIL
	PP GAS
	PP GEOTHERMAL
	PP OIL
	SECONDARY
	TERMINATED
Fields Status	
	Unknown
	ABANDONED
	ACTIVE
	COMBINED
	INACTIVE
	STORAGE
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	





**T9S, R21E, S.L.B.&M.**



NOTES:

- ▲ = Section Corners Located
1. Well footages are measured at right angles to the Section Lines.
  2. G.L.O. distances are shown in feet or chains.  
1 chain = 66 feet.
  3. The Bottom of hole bears N71°26'54"E 130.51' from the Surface Position.
  4. Bearings are based on Global Positioning Satellite observations.
  5. Basis of elevation is Tri-Sta "Two Water" located in the NW  $\frac{1}{4}$  of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

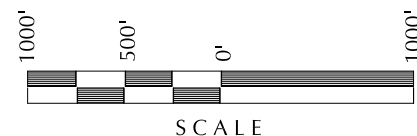
WELL PAD: NBU 921-20B

**NBU 921-20B**  
**WELL PLAT**

**716' FNL, 2122 FEL (Bottom Hole)**  
**NW  $\frac{1}{4}$  NE  $\frac{1}{4}$  OF SECTION 20, T9S, R21E,**  
**S.L.B.&M., UINTAH COUNTY, UTAH.**



**CONSULTING, LLC**  
2155 North Main Street  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182



### SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED  
FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR  
UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE  
AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

PROFESSIONAL LAND SURVEYOR  
REGISTRATION No. 6028691  
STATE OF UTAH

## TIMBERLINE

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 3-14-12	SURVEYED BY: A.F.	SHEET NO:  <b>4</b>  4 OF 19
DATE DRAWN: 3-21-12	DRAWN BY: T.J.R.	
SCALE: 1" = 1000'	Date Last Revised:	



**Kerr-McGee Oil & Gas Onshore, LP  
WELL PAD - NBU 921-20B  
WELLS - NBU 921-20B1CS,  
NBU 921-20A1BS, NBU 921-20B1BS,  
NBU 921-20B, NBU 921-20A1CS,  
NBU 921-20B4CS & NBU 921-20C1BS  
Section 20, T9S, R21E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 17.7 miles to a Class D County Road to the southwest. Exit right and proceed in a southwesterly direction along the Class D County Road approximately 1.8 miles to a second Class D County Road to the north. Exit right and proceed in a northerly direction along the second Class D County Road approximately 2.3 miles to a Tribal Road to the southwest. Continue in a southwesterly, then northwesterly direction along the Tribal Road approximately 1.5 miles to a service road to the west. Exit left and proceed in a westerly, then southwesterly direction along the service road approximately 0.4 miles to a second service road to the south. Exit left and proceed in a southerly, then westerly direction along the second service road approximately 0.2 miles to a third service road to the southwest. Exit left and proceed in a southwesterly direction along the third service road approximately 0.2 miles to the proposed access road to the south. Follow road flags in a southerly direction approximately 205 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 47.6 miles in a southerly direction.



**Kerr-McGee Oil & Gas Onshore. L.P.**

	<b>NBU 921-20B</b>	
Surface:	758 FNL / 2246 FEL	NWNE
BHL:	716 FNL / 2122 FEL	NWNE

Section 20 T9S R21E

Unitah County, Utah  
Mineral Lease: UTU-0575**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

1. & 2.a **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,717'	
Birds Nest	2,008'	Water
Mahogany	2,501'	Water
Wasatch	5,084'	Gas
Mesaverde	8,076'	Gas
Sego	10,341'	Gas
Castlegate	10,439'	Gas
Blackhawk	10,811'	Gas
TVD =	11,411'	
TD =	11,416'	

- 2.c Kerr McGee Oil & Gas Onshore LP (Kerr McGee) may elect to drill to (i) the Blackhawk formation (part of the Mesaverde Group), (ii) to a shallower depth within the Mesaverde Group, or (iii) to the Wasatch Formation. If Kerr McGee drills to the Blackhawk formation, please refer to Blackhawk as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr-McGee drills to a shallower depth in the Mesaverde Group or to the Wasatch Formation, please refer to the attached Wasatch/Mesaverde Drilling Program which includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the shallower formations.

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

6. **Evaluation Program:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

7. **Abnormal Conditions:**



**7.a Blackhawk (Part of Mesaverde Group)**

Maximum anticipated bottom hole pressure calculated at 11411' TVD, approximately equals  
7,303 psi (0.64 psi/ft = actual bottomhole gradient)

---

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,777 psi (bottom hole pressure  
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

---

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-  
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

**7.b Wasach Formation/Mesaverde Group**

Maximum anticipated bottom hole pressure calculated at 10341' TVD, approximately equals  
6,308 psi (0.61 psi/ft = actual bottomhole gradient)

---

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,060 psi (bottom hole pressure  
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

---

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-  
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

**8. Anticipated Starting Dates:**

Drilling is planned to commence immediately upon approval of this application.

**9. Variances:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program  
Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements  
associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated  
with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current  
air drilling practices for constructing the surface casing hole should be granted a variance to Onshore  
Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a  
historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to  
drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing  
hole in approximately 675 wells without incident of blow out or loss of life.

**Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the  
surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling  
operation does not drill through productive or over pressured formations in KMG field, but does  
penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome  
the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole  
for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the  
Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through  
a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may



be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

#### **Variance for BOPE Requirements**

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### **Variance for Mud Material Requirements**

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

#### **Variance for Special Drilling Operation (surface equipment placement) Requirements**

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

#### **Variance for FIT Requirements**

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.



**Conclusion**

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. **Other Information:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

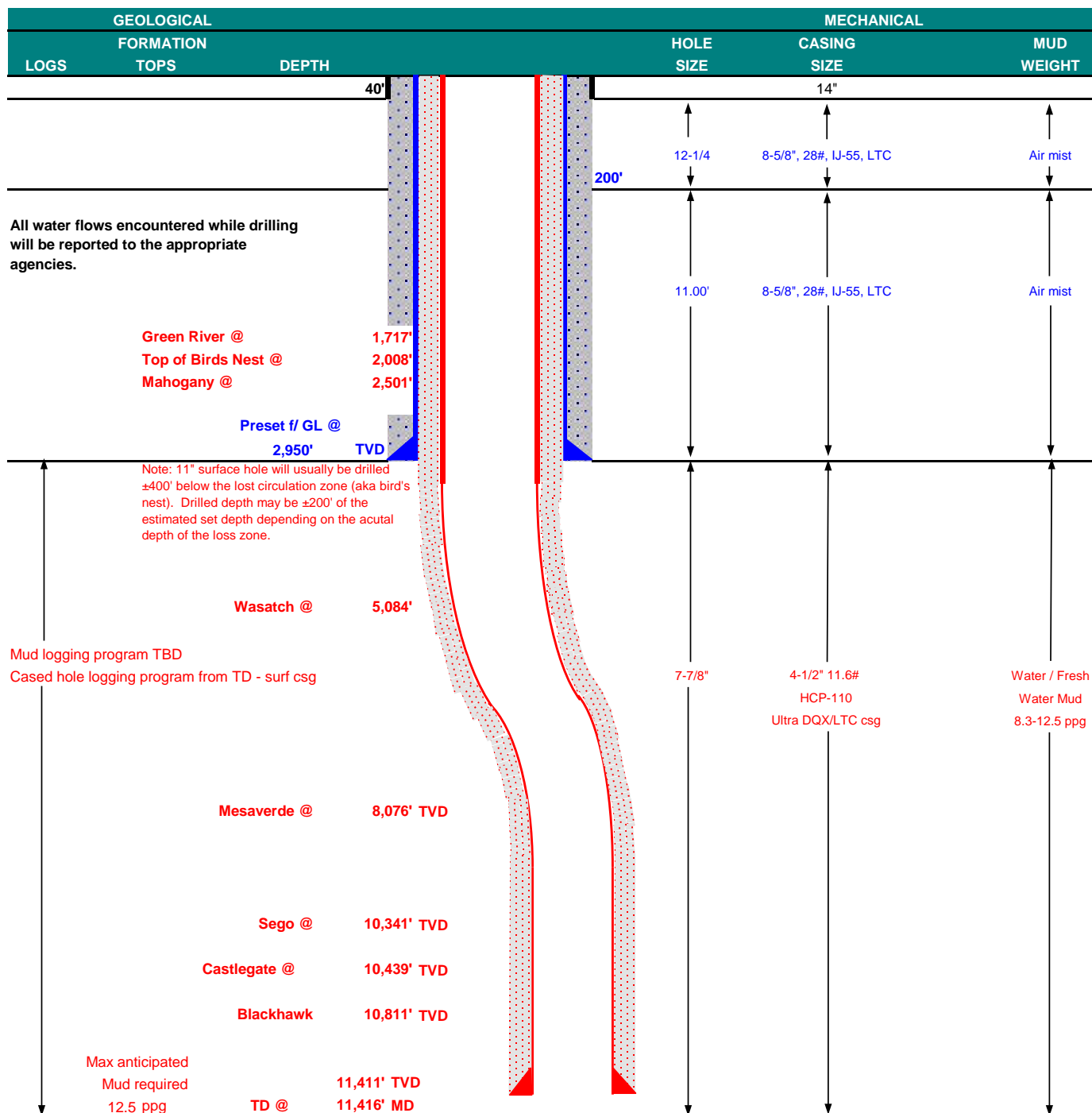




## KERR-McGEE OIL & GAS ONSHORE LP

### Blackhawk Drilling Program

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP					DATE	July 13, 2012		
WELL NAME	NBU 921-20B					TD	11,411'	TVD	11,416' MD
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION		4,873'
SURFACE LOCATION	NWNE	758 FNL	2246 FEL	Sec 20	T 9S	R 21E			
	Latitude: 40.026756		Longitude: -109.574186		NAD 83				
BTM HOLE LOCATION	NWNE	716 FNL	2122 FEL	Sec 20	T 9S	R 21E			
	Latitude: 40.026870		Longitude: -109.573745		NAD 83				
OBJECTIVE ZONE(S)	BLACKHAWK (Part of the Mesaverde Group)								
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), Ute Indian Tribe (Surface), UDOGM Tri-County Health Dept.								







## KERR-McGEE OIL & GAS ONSHORE LP

### Blackhawk Drilling Program

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'				3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,950	28.00	IJ-55	LTC	1.82	1.36	4.81	N/A
						10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0 to 5,000	11.60	HCP-110	DQX	1.19	1.17		3.43
	4-1/2"	5,000 to 11,416'	11.60	HCP-110	LTC	1.19	1.17	4.63	

**Surface Casing:**

(Burst Assumptions: TD = 12.5 ppg)

0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi)

0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
			+ 0.25 pps flocele				
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE		<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>					
Option 2	LEAD	2,450'	65/35 Poz + 6% Gel + 10 pps gilsonite	230	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,576'	Premium Lite II +0.25 pps	360	35%	12.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	6,840'	50/50 Poz/G + 10% salt + 2% gel	1,610	35%	14.30	1.31
			+ 0.1% R-3				

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

**FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

**ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

**DRILLING ENGINEER:**

Nick Spence / Danny Showers / Travis Hansell

DATE:

**DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

DATE:

**RECEIVED: Jul. 26, 2012**





**KERR-McGEE OIL & GAS ONSHORE LP**  
**Wasatch/Mesaverde Drilling Program**

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP					DATE	July 13, 2012		
WELL NAME	<b>NBU 921-20B</b>					TD	10,341'	TVD	10,346' MD
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION		4,873'
SURFACE LOCATION	NWNE	758 FNL	2246 FEL	Sec 20	T 9S	R 21E			
	Latitude:	40.026756	Longitude:	-109.574186		NAD 83			
BTM HOLE LOCATION	NWNE	716 FNL	2122 FEL	Sec 20	T 9S	R 21E			
	Latitude:	40.026870	Longitude:	-109.573745		NAD 83			
OBJECTIVE ZONE(S)	Wasatch Formation/Mesaverde Group								
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), Ute Indian Tribe (Surface), UDOGM Tri-County Health Dept.								

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
			↑ 12-1/4 ↓	↑ 8-5/8", 28#, IJ-55, LTC ↓	↑ Air mist ↓
		200'			
All water flows encountered while drilling will be reported to the appropriate agencies.			↑ 11.00' ↓	↑ 8-5/8", 28#, IJ-55, LTC ↓	↑ Air mist ↓
<b>Green River @ 1,717'</b>					
<b>Top of Birds Nest @ 2,008'</b>					
<b>Mahogany @ 2,501'</b>					
<b>Preset f/ GL @ 2,950' TVD</b>					
Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the actual depth of the loss zone.					
<b>Wasatch @ 5,084'</b>					
Mud logging program TBD Cased hole logging program from TD - surf csg			↑ 7-7/8" ↓	↑ 4-1/2" 11.6# I-80/HCP-110 Ultra DQX/LTC csg ↓	↑ Water / Fresh Water Mud 8.3-12.0 ppg ↓
<b>Mesaverde @ 8,076' TVD</b>					
<b>Sego @ 10,341' TVD</b>					
<b>Max anticipated Mud required 12.0 ppg</b>					
<b>TD @ 10,341' TVD 10,346' MD</b>					





## KERR-McGEE OIL & GAS ONSHORE LP

### Wasatch/Mesaverde Drilling Program

**CASING PROGRAM**

	DESIGN FACTORS								
	LTC								DQX
	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'					3,390	1,880	348,000
									N/A
SURFACE	8-5/8"	0	to 2,950	28.00	IJ-55	LTC	1.82	1.36	4.81
							7,780	6,350	267,035
PRODUCTION	4-1/2"	0	to 5,000	11.60	I-80	DQX	1.11	0.98	2.72
							10,690	8,650	223,000
	4-1/2"	5,000	to 10,346'	11.60	HCP-110	LTC	1.53	1.34	4.40

**Surface Casing:**

(Burst Assumptions: TD = 12.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoys.Fact. of water)

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.61 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoys.Fact. of water)

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
			+ 0.25 pps flocele				
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE			NOTE: If well will circulate water to surface, option 2 will be utilized				
Option 2							
	LEAD	2,450'	65/35 Poz + 6% Gel + 10 pps gilsonite	230	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,576'	Premium Lite II +0.25 pps	360	35%	12.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	5,770'	50/50 Poz/G + 10% salt + 2% gel	1,360	35%	14.30	1.31
			+ 0.1% R-3				

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

**FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

**ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

**DRILLING ENGINEER:**

Nick Spence / Danny Showers / Travis Hansell

DATE:

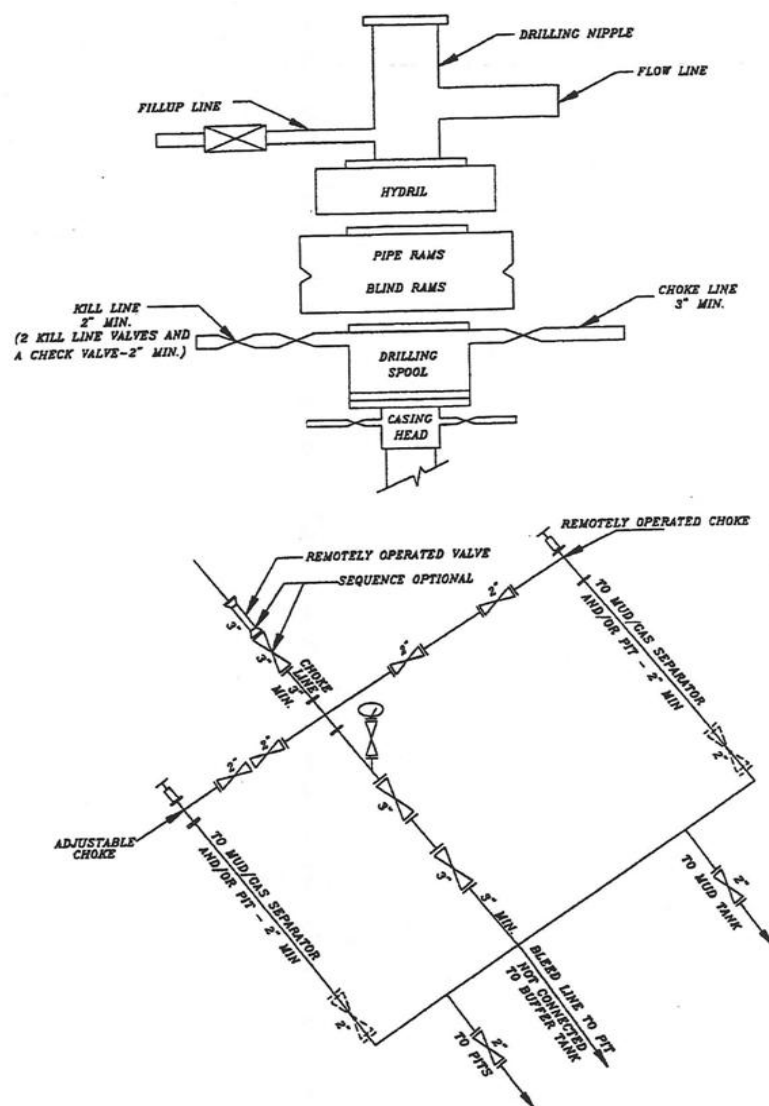
**DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

DATE:

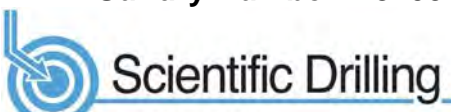
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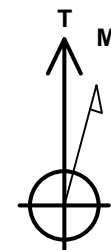
EXHIBIT A  
NBU 921-20B

SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK





Site: NBU 921-20B PAD  
Well: NBU 921-20B  
Wellbore: OH  
Design: PLAN #1 PRELIMINARY



Azimuths to True North  
Magnetic North: 10.98°

Magnetic Field  
Strength: 52237.4snT  
Dip Angle: 65.85°  
Date: 2012/06/05  
Model: IGRF2010

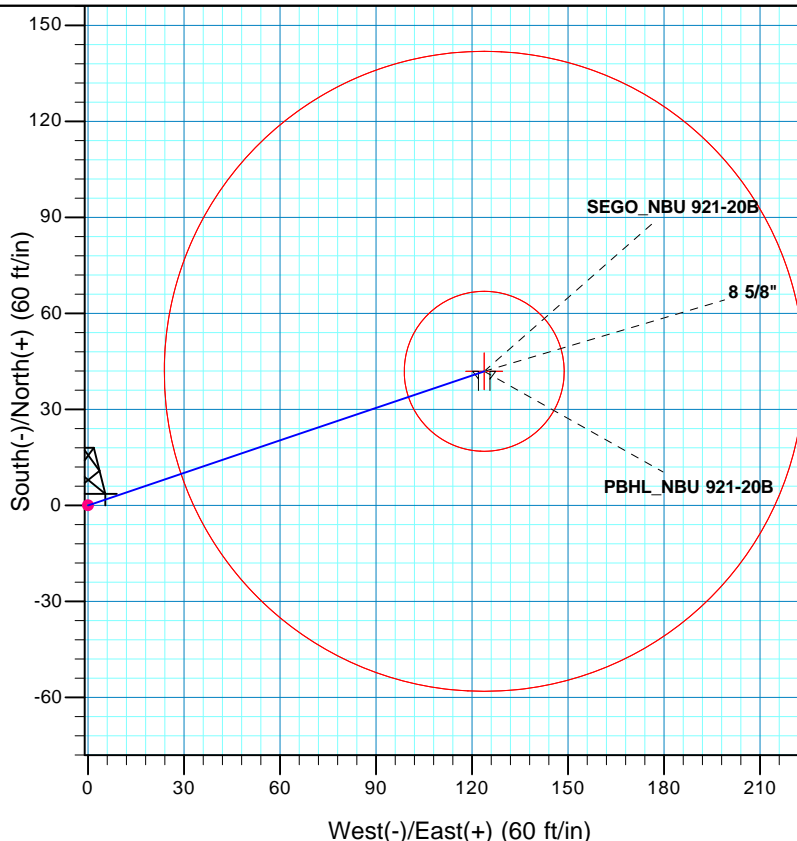
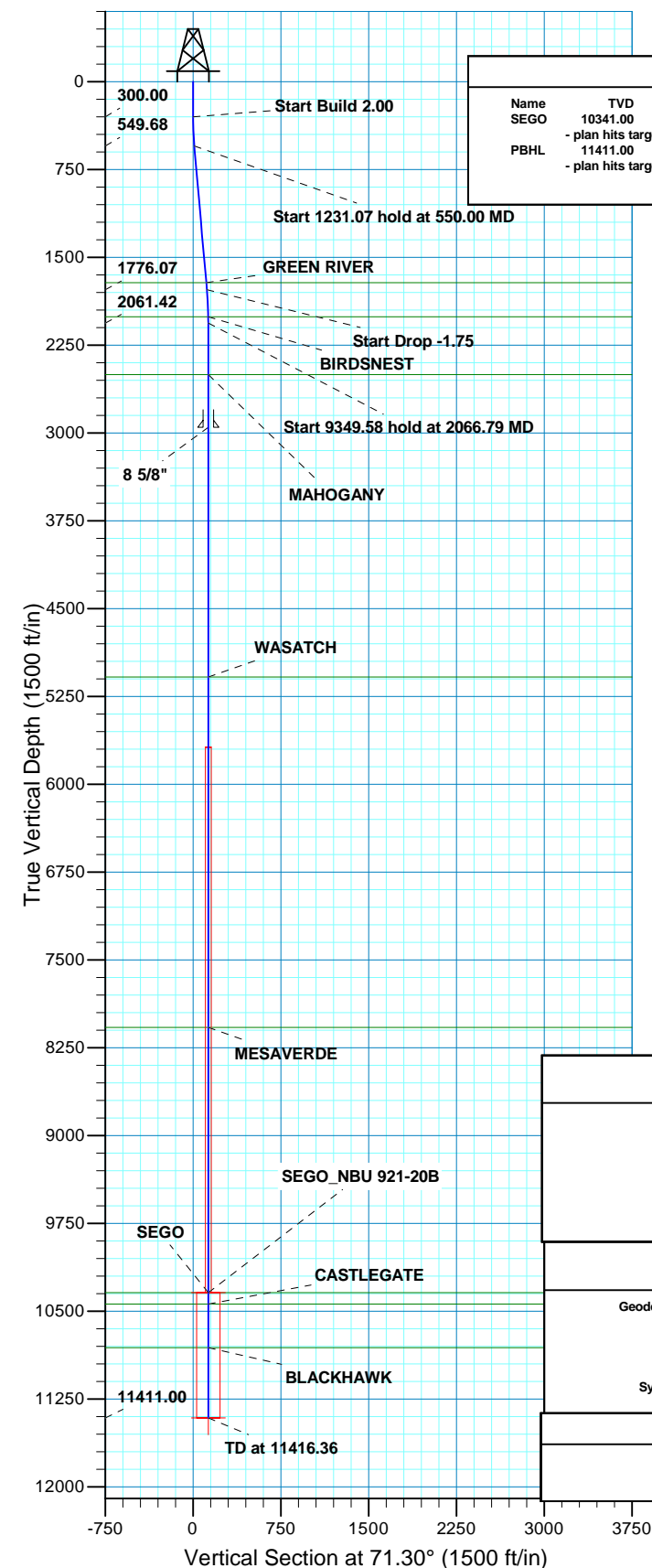
WELL DETAILS: NBU 921-20B

GL 4877 & KB 4 @ 4877.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14538997.61	2039771.73	40.026791	-109.573497

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SEGO	10341.00	41.88	123.76	14539041.47	2039894.80	40.026906	-109.573055	Circle (Radius: 25.00)
PBHL	11411.00	41.88	123.76	14539041.47	2039894.80	40.026906	-109.573055	Circle (Radius: 100.00)
- plan hits target center								



#### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSEct
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
550.00	5.00	71.30	549.68	3.49	10.33	2.00	71.30	10.90
1781.07	5.00	71.30	1776.07	37.89	111.96	0.00	0.00	118.20
2066.79	0.00	0.00	2061.42	41.88	123.76	1.75	180.00	130.66
11416.36	0.00	0.00	11411.00	41.88	123.76	0.00	0.00	130.66

#### PROJECT DETAILS: Uintah County, UT UTM12

Geodetic System: Universal Transverse Mercator (US Survey Feet)  
Datum: NAD 1927 - Western US  
Ellipsoid: Clarke 1866  
Zone: Zone 12N (114 W to 108 W)  
Location: SECTION 20 T9S R21E  
System Datum: Mean Sea Level

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1717.00	1721.78	GREEN RIVER
2008.00	2013.36	BIRDSNEST
2501.00	2506.36	MAHOGANY
5084.00	5089.36	WASATCH
8076.00	8081.36	MESAVERDE
10341.00	10346.36	SEGO
10439.00	10444.36	CASTLEGATE
10811.00	10816.36	BLACKHAWK

#### CASING DETAILS

TVD	MD	Name	Size
2951.00	2956.36	8 5/8"	8.625

Plan: PLAN #1 PRELIMINARY (NBU 921-20B/OH)

Created By: RobertScott Date: 13:50, July 03 2012





# **Kerr McGee Oil and Gas Onshore LP**

**Uintah County, UT UTM12  
NBU 921-20B PAD  
NBU 921-20B**

**OH**

**Plan: PLAN #1 PRELIMINARY**

## **Standard Planning Report**

**03 July, 2012**







<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 921-20B
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4877 & KB 4 @ 4877.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4877 & KB 4 @ 4877.00ft (ASSUMED)
<b>Site:</b>	NBU 921-20B PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-20B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

<b>Project</b>	Uintah County, UT UTM12		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 921-20B PAD, SECTION 20 T9S R21E			
<b>Site Position:</b>		<b>Northing:</b>	14,539,017.64 usft	<b>Latitude:</b> 40.026845
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,039,794.09 usft	<b>Longitude:</b> -109.573416
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> 0.92 °

Well	NBU 921-20B, 758 FNL 2246 FEL					
Well Position	+N/-S	-19.67 ft	Northing:	14,538,997.62 usft	Latitude:	40.026791
	+E/-W	-22.68 ft	Easting:	2,039,771.73 usft	Longitude:	-109.573497
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,873.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	2012/06/05	10.98	65.85	52,237

<b>Design</b>	PLAN #1 PRELIMINARY			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	71.30

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
550.00	5.00	71.30	549.68	3.49	10.33	2.00	2.00	0.00	71.30	
1,781.07	5.00	71.30	1,776.07	37.89	111.96	0.00	0.00	0.00	0.00	
2,066.79	0.00	0.00	2,061.42	41.88	123.76	1.75	-1.75	0.00	180.00	
11,416.36	0.00	0.00	11,411.00	41.88	123.76	0.00	0.00	0.00	0.00	PBHL_NBU 921-20B





<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 921-20B
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4877 & KB 4 @ 4877.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4877 & KB 4 @ 4877.00ft (ASSUMED)
<b>Site:</b>	NBU 921-20B PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-20B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
400.00	2.00	71.30	399.98	0.56	1.65	1.75	2.00	2.00	0.00
500.00	4.00	71.30	499.84	2.24	6.61	6.98	2.00	2.00	0.00
550.00	5.00	71.30	549.68	3.49	10.33	10.90	2.00	2.00	0.00
<b>Start 1231.07 hold at 550.00 MD</b>									
600.00	5.00	71.30	599.49	4.89	14.45	15.26	0.00	0.00	0.00
700.00	5.00	71.30	699.11	7.69	22.71	23.97	0.00	0.00	0.00
800.00	5.00	71.30	798.73	10.48	30.97	32.69	0.00	0.00	0.00
900.00	5.00	71.30	898.35	13.27	39.22	41.41	0.00	0.00	0.00
1,000.00	5.00	71.30	997.97	16.07	47.48	50.12	0.00	0.00	0.00
1,100.00	5.00	71.30	1,097.59	18.86	55.73	58.84	0.00	0.00	0.00
1,200.00	5.00	71.30	1,197.21	21.66	63.99	67.55	0.00	0.00	0.00
1,300.00	5.00	71.30	1,296.83	24.45	72.24	76.27	0.00	0.00	0.00
1,400.00	5.00	71.30	1,396.45	27.24	80.50	84.98	0.00	0.00	0.00
1,500.00	5.00	71.30	1,496.07	30.04	88.75	93.70	0.00	0.00	0.00
1,600.00	5.00	71.30	1,595.69	32.83	97.01	102.41	0.00	0.00	0.00
1,700.00	5.00	71.30	1,695.31	35.62	105.27	111.13	0.00	0.00	0.00
1,721.78	5.00	71.30	1,717.00	36.23	107.06	113.03	0.00	0.00	0.00
<b>GREEN RIVER</b>									
1,781.07	5.00	71.30	1,776.07	37.89	111.96	118.20	0.00	0.00	0.00
<b>Start Drop -1.75</b>									
1,800.00	4.67	71.30	1,794.93	38.40	113.47	119.79	1.75	-1.75	0.00
1,900.00	2.92	71.30	1,894.71	40.52	119.74	126.41	1.75	-1.75	0.00
2,000.00	1.17	71.30	1,994.64	41.67	123.11	129.97	1.75	-1.75	0.00
2,013.36	0.93	71.30	2,008.00	41.74	123.35	130.22	1.75	-1.75	0.00
<b>BIRDSNEST</b>									
2,066.79	0.00	0.00	2,061.42	41.88	123.76	130.66	1.75	-1.75	0.00
<b>Start 9349.58 hold at 2066.79 MD</b>									
2,100.00	0.00	0.00	2,094.64	41.88	123.76	130.66	0.00	0.00	0.00
2,200.00	0.00	0.00	2,194.64	41.88	123.76	130.66	0.00	0.00	0.00
2,300.00	0.00	0.00	2,294.64	41.88	123.76	130.66	0.00	0.00	0.00
2,400.00	0.00	0.00	2,394.64	41.88	123.76	130.66	0.00	0.00	0.00
2,500.00	0.00	0.00	2,494.64	41.88	123.76	130.66	0.00	0.00	0.00
2,506.36	0.00	0.00	2,501.00	41.88	123.76	130.66	0.00	0.00	0.00
<b>MAHOGANY</b>									
2,600.00	0.00	0.00	2,594.64	41.88	123.76	130.66	0.00	0.00	0.00
2,700.00	0.00	0.00	2,694.64	41.88	123.76	130.66	0.00	0.00	0.00
2,800.00	0.00	0.00	2,794.64	41.88	123.76	130.66	0.00	0.00	0.00
2,900.00	0.00	0.00	2,894.64	41.88	123.76	130.66	0.00	0.00	0.00
2,956.36	0.00	0.00	2,951.00	41.88	123.76	130.66	0.00	0.00	0.00
<b>8 5/8"</b>									
3,000.00	0.00	0.00	2,994.64	41.88	123.76	130.66	0.00	0.00	0.00
3,100.00	0.00	0.00	3,094.64	41.88	123.76	130.66	0.00	0.00	0.00
3,200.00	0.00	0.00	3,194.64	41.88	123.76	130.66	0.00	0.00	0.00
3,300.00	0.00	0.00	3,294.64	41.88	123.76	130.66	0.00	0.00	0.00
3,400.00	0.00	0.00	3,394.64	41.88	123.76	130.66	0.00	0.00	0.00
3,500.00	0.00	0.00	3,494.64	41.88	123.76	130.66	0.00	0.00	0.00
3,600.00	0.00	0.00	3,594.64	41.88	123.76	130.66	0.00	0.00	0.00
3,700.00	0.00	0.00	3,694.64	41.88	123.76	130.66	0.00	0.00	0.00





<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 921-20B
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4877 & KB 4 @ 4877.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4877 & KB 4 @ 4877.00ft (ASSUMED)
<b>Site:</b>	NBU 921-20B PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-20B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,800.00	0.00	0.00	3,794.64	41.88	123.76	130.66	0.00	0.00	0.00
3,900.00	0.00	0.00	3,894.64	41.88	123.76	130.66	0.00	0.00	0.00
4,000.00	0.00	0.00	3,994.64	41.88	123.76	130.66	0.00	0.00	0.00
4,100.00	0.00	0.00	4,094.64	41.88	123.76	130.66	0.00	0.00	0.00
4,200.00	0.00	0.00	4,194.64	41.88	123.76	130.66	0.00	0.00	0.00
4,300.00	0.00	0.00	4,294.64	41.88	123.76	130.66	0.00	0.00	0.00
4,400.00	0.00	0.00	4,394.64	41.88	123.76	130.66	0.00	0.00	0.00
4,500.00	0.00	0.00	4,494.64	41.88	123.76	130.66	0.00	0.00	0.00
4,600.00	0.00	0.00	4,594.64	41.88	123.76	130.66	0.00	0.00	0.00
4,700.00	0.00	0.00	4,694.64	41.88	123.76	130.66	0.00	0.00	0.00
4,800.00	0.00	0.00	4,794.64	41.88	123.76	130.66	0.00	0.00	0.00
4,900.00	0.00	0.00	4,894.64	41.88	123.76	130.66	0.00	0.00	0.00
5,000.00	0.00	0.00	4,994.64	41.88	123.76	130.66	0.00	0.00	0.00
5,089.36	0.00	0.00	5,084.00	41.88	123.76	130.66	0.00	0.00	0.00
<b>WASATCH</b>									
5,100.00	0.00	0.00	5,094.64	41.88	123.76	130.66	0.00	0.00	0.00
5,200.00	0.00	0.00	5,194.64	41.88	123.76	130.66	0.00	0.00	0.00
5,300.00	0.00	0.00	5,294.64	41.88	123.76	130.66	0.00	0.00	0.00
5,400.00	0.00	0.00	5,394.64	41.88	123.76	130.66	0.00	0.00	0.00
5,500.00	0.00	0.00	5,494.64	41.88	123.76	130.66	0.00	0.00	0.00
5,600.00	0.00	0.00	5,594.64	41.88	123.76	130.66	0.00	0.00	0.00
5,700.00	0.00	0.00	5,694.64	41.88	123.76	130.66	0.00	0.00	0.00
5,800.00	0.00	0.00	5,794.64	41.88	123.76	130.66	0.00	0.00	0.00
5,900.00	0.00	0.00	5,894.64	41.88	123.76	130.66	0.00	0.00	0.00
6,000.00	0.00	0.00	5,994.64	41.88	123.76	130.66	0.00	0.00	0.00
6,100.00	0.00	0.00	6,094.64	41.88	123.76	130.66	0.00	0.00	0.00
6,200.00	0.00	0.00	6,194.64	41.88	123.76	130.66	0.00	0.00	0.00
6,300.00	0.00	0.00	6,294.64	41.88	123.76	130.66	0.00	0.00	0.00
6,400.00	0.00	0.00	6,394.64	41.88	123.76	130.66	0.00	0.00	0.00
6,500.00	0.00	0.00	6,494.64	41.88	123.76	130.66	0.00	0.00	0.00
6,600.00	0.00	0.00	6,594.64	41.88	123.76	130.66	0.00	0.00	0.00
6,700.00	0.00	0.00	6,694.64	41.88	123.76	130.66	0.00	0.00	0.00
6,800.00	0.00	0.00	6,794.64	41.88	123.76	130.66	0.00	0.00	0.00
6,900.00	0.00	0.00	6,894.64	41.88	123.76	130.66	0.00	0.00	0.00
7,000.00	0.00	0.00	6,994.64	41.88	123.76	130.66	0.00	0.00	0.00
7,100.00	0.00	0.00	7,094.64	41.88	123.76	130.66	0.00	0.00	0.00
7,200.00	0.00	0.00	7,194.64	41.88	123.76	130.66	0.00	0.00	0.00
7,300.00	0.00	0.00	7,294.64	41.88	123.76	130.66	0.00	0.00	0.00
7,400.00	0.00	0.00	7,394.64	41.88	123.76	130.66	0.00	0.00	0.00
7,500.00	0.00	0.00	7,494.64	41.88	123.76	130.66	0.00	0.00	0.00
7,600.00	0.00	0.00	7,594.64	41.88	123.76	130.66	0.00	0.00	0.00
7,700.00	0.00	0.00	7,694.64	41.88	123.76	130.66	0.00	0.00	0.00
7,800.00	0.00	0.00	7,794.64	41.88	123.76	130.66	0.00	0.00	0.00
7,900.00	0.00	0.00	7,894.64	41.88	123.76	130.66	0.00	0.00	0.00
8,000.00	0.00	0.00	7,994.64	41.88	123.76	130.66	0.00	0.00	0.00
8,081.36	0.00	0.00	8,076.00	41.88	123.76	130.66	0.00	0.00	0.00
<b>MESAVERDE</b>									
8,100.00	0.00	0.00	8,094.64	41.88	123.76	130.66	0.00	0.00	0.00
8,200.00	0.00	0.00	8,194.64	41.88	123.76	130.66	0.00	0.00	0.00
8,300.00	0.00	0.00	8,294.64	41.88	123.76	130.66	0.00	0.00	0.00
8,400.00	0.00	0.00	8,394.64	41.88	123.76	130.66	0.00	0.00	0.00
8,500.00	0.00	0.00	8,494.64	41.88	123.76	130.66	0.00	0.00	0.00
8,600.00	0.00	0.00	8,594.64	41.88	123.76	130.66	0.00	0.00	0.00
8,700.00	0.00	0.00	8,694.64	41.88	123.76	130.66	0.00	0.00	0.00





<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 921-20B
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4877 & KB 4 @ 4877.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4877 & KB 4 @ 4877.00ft (ASSUMED)
<b>Site:</b>	NBU 921-20B PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-20B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,800.00	0.00	0.00	8,794.64	41.88	123.76	130.66	0.00	0.00	0.00
8,900.00	0.00	0.00	8,894.64	41.88	123.76	130.66	0.00	0.00	0.00
9,000.00	0.00	0.00	8,994.64	41.88	123.76	130.66	0.00	0.00	0.00
9,100.00	0.00	0.00	9,094.64	41.88	123.76	130.66	0.00	0.00	0.00
9,200.00	0.00	0.00	9,194.64	41.88	123.76	130.66	0.00	0.00	0.00
9,300.00	0.00	0.00	9,294.64	41.88	123.76	130.66	0.00	0.00	0.00
9,400.00	0.00	0.00	9,394.64	41.88	123.76	130.66	0.00	0.00	0.00
9,500.00	0.00	0.00	9,494.64	41.88	123.76	130.66	0.00	0.00	0.00
9,600.00	0.00	0.00	9,594.64	41.88	123.76	130.66	0.00	0.00	0.00
9,700.00	0.00	0.00	9,694.64	41.88	123.76	130.66	0.00	0.00	0.00
9,800.00	0.00	0.00	9,794.64	41.88	123.76	130.66	0.00	0.00	0.00
9,900.00	0.00	0.00	9,894.64	41.88	123.76	130.66	0.00	0.00	0.00
10,000.00	0.00	0.00	9,994.64	41.88	123.76	130.66	0.00	0.00	0.00
10,100.00	0.00	0.00	10,094.64	41.88	123.76	130.66	0.00	0.00	0.00
10,200.00	0.00	0.00	10,194.64	41.88	123.76	130.66	0.00	0.00	0.00
10,300.00	0.00	0.00	10,294.64	41.88	123.76	130.66	0.00	0.00	0.00
10,346.36	0.00	0.00	10,341.00	41.88	123.76	130.66	0.00	0.00	0.00
<b>SEGO - SEGO_NBU 921-20B</b>									
10,400.00	0.00	0.00	10,394.64	41.88	123.76	130.66	0.00	0.00	0.00
10,444.36	0.00	0.00	10,439.00	41.88	123.76	130.66	0.00	0.00	0.00
<b>CASTLEGATE</b>									
10,500.00	0.00	0.00	10,494.64	41.88	123.76	130.66	0.00	0.00	0.00
10,600.00	0.00	0.00	10,594.64	41.88	123.76	130.66	0.00	0.00	0.00
10,700.00	0.00	0.00	10,694.64	41.88	123.76	130.66	0.00	0.00	0.00
10,800.00	0.00	0.00	10,794.64	41.88	123.76	130.66	0.00	0.00	0.00
10,816.36	0.00	0.00	10,811.00	41.88	123.76	130.66	0.00	0.00	0.00
<b>BLACKHAWK</b>									
10,900.00	0.00	0.00	10,894.64	41.88	123.76	130.66	0.00	0.00	0.00
11,000.00	0.00	0.00	10,994.64	41.88	123.76	130.66	0.00	0.00	0.00
11,100.00	0.00	0.00	11,094.64	41.88	123.76	130.66	0.00	0.00	0.00
11,200.00	0.00	0.00	11,194.64	41.88	123.76	130.66	0.00	0.00	0.00
11,300.00	0.00	0.00	11,294.64	41.88	123.76	130.66	0.00	0.00	0.00
11,400.00	0.00	0.00	11,394.64	41.88	123.76	130.66	0.00	0.00	0.00
11,416.36	0.00	0.00	11,411.00	41.88	123.76	130.66	0.00	0.00	0.00
<b>TD at 11416.36 - PBHL_NBU 921-20B</b>									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
SEGO_NBU 921-20B	0.00	0.00	10,341.00	41.88	123.76	14,539,041.48	2,039,894.80	40.026906	-109.573055
- plan hits target center									
- Circle (radius 25.00)									
PBHL_NBU 921-20B	0.00	0.00	11,411.00	41.88	123.76	14,539,041.48	2,039,894.80	40.026906	-109.573055
- plan hits target center									
- Circle (radius 100.00)									





<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 921-20B
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4877 & KB 4 @ 4877.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4877 & KB 4 @ 4877.00ft (ASSUMED)
<b>Site:</b>	NBU 921-20B PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-20B	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,956.36	2,951.00	8 5/8"	8.625	11.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,721.78	1,717.00	GREEN RIVER			
2,013.36	2,008.00	BIRDSNEST			
2,506.36	2,501.00	MAHOGANY			
5,089.36	5,084.00	WASATCH			
8,081.36	8,076.00	MESAVERDE			
10,346.36	10,341.00	SEGO			
10,444.36	10,439.00	CASTLEGATE			
10,816.36	10,811.00	BLACKHAWK			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
300.00	300.00	0.00	0.00	Start Build 2.00	
550.00	549.68	3.49	10.33	Start 1231.07 hold at 550.00 MD	
1,781.07	1,776.07	37.89	111.96	Start Drop -1.75	
2,066.79	2,061.42	41.88	123.76	Start 9349.58 hold at 2066.79 MD	
11,416.36	11,411.00	41.88	123.76	TD at 11416.36	



NBU 921-20B/ 921-20A1BS/ 921-20A1CS/ 921-20B1BS  
NBU 921-20B1CS/ 921-20B4CS/ 921-20C1BS  
Kerr-McGee Oil Gas Onshore, L.P.

Surface Use Plan of Operations  
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**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 921-20B Pad**

<u><b>API #</b></u>	<u><b>NBU 921-20A1BS</b></u>		
	Surface:	745 FNL / 2231 FEL	NWNE Lot
	BHL:	83 FNL / 491 FEL	NENE Lot
<u><b>API #</b></u>	<u><b>NBU 921-20A1CS</b></u>		
	Surface:	764 FNL / 2253 FEL	NWNE Lot
	BHL:	413 FNL / 491 FEL	NENE Lot
<u><b>API #4304750715</b></u>	<u><b>NBU 921-20B</b></u>		
	Surface:	758 FNL / 2246 FEL	NWNE Lot
	BHL:	716 FNL / 2122 FEL	NWNE Lot
<u><b>API #</b></u>	<u><b>NBU 921-20B1BS</b></u>		
	Surface:	751 FNL / 2238 FEL	NWNE Lot
	BHL:	248 FNL / 1808 FEL	NWNE Lot
<u><b>API #</b></u>	<u><b>NBU 921-20B1CS</b></u>		
	Surface:	738 FNL / 2223 FEL	NWNE Lot
	BHL:	578 FNL / 1808 FEL	NWNE Lot
<u><b>API #</b></u>	<u><b>NBU 921-20B4CS</b></u>		
	Surface:	771 FNL / 2261 FEL	NWNE Lot
	BHL:	1240 FNL / 1807 FEL	NWNE Lot
<u><b>API #</b></u>	<u><b>NBU 921-20C1BS</b></u>		
	Surface:	777 FNL / 2269 FEL	NWNE Lot
	BHL:	83 FNL / 2136 FWL	NENW Lot

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on May 8, 2012. Present were:

- David Gordon, Melissa Wardle, Tyler Cox - BLM;
- Bucky Secakuku - BIA;
- Brad Pinecoose - Ute Indian Tribe;
- Amy Ackman - Montgomery Archeological Consultants Inc.;
- Scott Carson - Smiling Lake Consulting;
- John Slaugh, Mitch Batty - Timberline Engineering & Land Surveying, Inc.;
- Danielle Piernot, Raleen White, Doyle Holmes, Rod Anderson, Charles Chase - Kerr-McGee
- Tim Horgan-Kobelski - Grasslands Consulting, Inc.
- Justin Strauss - SWCA Environmental Consultants

**A. Existing Roads:**

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition



that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Please refer to Topo B, for existing roads.

**B. New or Reconstructed Access Roads:**

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BIA.

Each new well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

Where safety objectives can be met. As applicable, Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V- or wing-ditches, will be constructed to divert surface water runoff. Drainage features, including culverts, will be constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s), as necessary.

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.



NBU 921-20B/ 921-20A1BS/ 921-20A1CS/ 921-20B1BS  
NBU 921-20B1CS/ 921-20B4CS/ 921-20C1BS  
Kerr-McGee Oil Gas Onshore, L.P.

Surface Use Plan of Operations  
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Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

**The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.**

±205' (0.04 miles) – Section 20 (NW/4 NE/4) T9S R21E – On lease UTU0575 Ute Indian Tribe surface, new road from the edge of the pad to the existing road to the north. Please refer to Topo B.

**C. Location of Existing Wells:**

A) Refer to Topo Map C.

**D. Location of Existing and/or Proposed Facilities:**

This is a new pad; therefore does not have any existing facilities. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore (Kerr-McGee).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A berm will be constructed completely around production components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer, will be painted a flat, non-reflective, earth-tone color chosen at the onsite (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

**GAS GATHERING**

*Please refer to Topo D2- Pad and Pipeline Detail.*

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is ±1,180' and the individual segments are broken up as follows:

**The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.**

±1,180' (0.1 miles) – Section 20 and Section 17 T9S R21E– On-lease UTU0575 Ute Indian Tribe Surface, New 8" buried gas gathering pipeline from the meter to the NBU 921-170 Pad intersection. Please refer to Topo D2 - Pad and Pipeline Detail.

**LIQUID GATHERING**

*Please refer to Topo D2- Pad and Pipeline Detail.*

The total liquid gathering pipeline distance from the separator to the tie in point is ±1,180' and the individual segments are broken up as follows:

**The following segments will require a ROW to be submitted under a different cover to the Ute Indian Tribe.**

±1,180' (0.1 miles) – Section 20 and Section 17 T9S R21E– On-lease UTU0575 Ute Indian Tribe Surface, New 6" buried liquid gathering pipeline from the separator to the NBU 921-170 Pad intersection. Please refer to Topo D2 - Pad and Pipeline Detail.



**Pipeline Gathering Construction**

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee. Gas gathering pipeline(s), gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45 ft for buried lines and 30 ft for surface lines. In addition, Kerr-McGee requests for a permanent 30' disturbance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent disturbance width is for maintenance and repairs. Cross country permanent disturbance width also are required to be 30ft.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If two or more pipelines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

Typically, to install a buried pipeline, topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface.

Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves and lateral T's will be installed at various locations for production integrity and safety purposes.



Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, Kerr-McGee or it's successor will consult with the Vernal BIA Office before terminating the use of the pipeline(s).

**The Anadarko Completions Transportation System (ACTS) information:**

Kerr-McGee will use either a closed loop drilling system that will require one pit and one storage area to be constructed on the drilling pad or a traditional drilling operation with one pit. The storage area will be used to contain only the de-watered drill cuttings and will be lined and reclaimed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit is lined and will be used for the wells drilled on the pad or used as part of our Anadarko Completions Transportation (ACTS) system which is discussed in more detail below. Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completion pit.

If Kerr-McGee does not use a closed loop system, it will construct a drilling reserve pit to contain drill cuttings and for use in completion operations. Depending on the location of the pit, its relation to future drilling locations, the reserve/completion pit will be utilized for the completion of the wells on that pad and/or be used as part of our ACTS system.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The pit will be refurbished as follows when a traditional drill pit is used: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit.

All four sides of the completions pit will be fenced in according to standard pit fencing procedures. Netting will be installed over all pits.

The collected hydrocarbons will be treated and sold at approved sales facilities. A loading rack with drip containment will also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit .

ACTS will require temporarily laying multiple 6" aluminum water transfer lines on the surface between either existing or refurbished reserve pits. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the completion process and will be laid adjacent to existing access roads or pipeline corridors.

Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The temporary ACTS lines will be permitted under a separate cover to the Ute Indian Tribe.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production of the first produced well on the pad. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. If the pit is not needed for an entire year it will be backfilled and reclaimed earlier. Kerr-McGee understands that due to the temporary nature of this system, BIA considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BIA.



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**E. Location and Types of Water Supply:**

Water for drilling and completion operations will be obtained from the following sources:

Permit # 49-2307	JD Field Services	Green River- Section 15, T2N, R22E
Permit # 49-2321	R.N. Industries	White River- Section 2, T10S, R24E
Permit # 49-2319	R.N. Industries	White River- Various Sources
Permit # 49-2320	R.N. Industries	Green River- Section 33, T8S, R23E

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

**F. Construction Materials:**

Construction operations will typically be completed with native materials found on location. Construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from Tribal lands without prior approval from the BIA. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BIA.

**G. Methods for Handling Waste:**

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including the BIA, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit whether a closed loop system is used or not. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BIA, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil storage areas and/or construction of berms, ditches, etc.). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by the BIA. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).



The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BIA.

Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after one year from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.



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### **Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance or meet the quantities criteria per BLM Instruction Memorandum No. 93-344 will not be used.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities (crude oil/condensate, produced water). They may also be kept in limited quantities on drilling sites (barite, diesel fuel, cement, cottonseed hulls etc.) for short periods of time during drilling or completion activities.

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E  
NBU #159 in Sec. 35 T9S R21E  
Ace Oilfield in Sec. 2 T6S R20E  
MC&MC in Sec. 12 T6S R19E  
Pipeline Facility in Sec. 36 T9S R20E  
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E  
Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E  
CIGE 112D SWD in Sec. 19 T9S R21E  
CIGE 114 SWD in Sec. 34 T9S R21E  
NBU 921-34K SWD in Sec. 34 T9S R21E  
NBU 921-33F SWD in Sec. 34 T9S R21E



**H. Ancillary Facilities:**

No additional ancillary facilities are planned for this location.

**I. Well Site Layout:**

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit (for closed loop or non-closed loop operations), access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment depending on whether a closed loop system is used. Surface distance may be less if using closed loop. But in either case, the area of disturbance will not exceed the maximum disturbance outlined in the attached exhibits.

For the protection of livestock and wildlife, all open pits and cellars will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production/ Produced Liquid tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BIA.

**J. Plans for Surface Reclamation:**

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

**Interim Reclamation**

Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BIA for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.



A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

**Final Reclamation**

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BIA will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers, where practical. The surface soil material will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BIA/Tribe. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications as proposed below in "Measures Common to Interim and Final Reclamation".

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BIA/Tribe.

**Measures Common to Interim and Final Reclamation**

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a "picker box" in order to seed "fluffy" seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for



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re-vegetation. The seed mixes will be selected from a list provided by or approved by the BIA/Tribe or a specific seed mix will be proposed by Kerr-McGee to the BIA/Tribe and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain "cheat grass free seed".

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

Indian Ricegrass (Nezpar)	3
Sandberg Bluegrass	0.75
Bottlebrush Squirreltail	1
Great Basin Wildrye	0.5
Crested Wheatgrass	1.5
Winterfat	0.25
Shadscale	1.5
Four-wing Saltbrush	0.75
Forage Kochia	0.25
<b>Total</b>	<b>9.5</b>

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

#### **Weed Control**

Noxious weeds will be controlled in all or affected areas in accordance with all applicable rules and regulations.

#### **K. Surface/Mineral Ownership:**

Ute Indian Tribe	United States of America
P.O. Box 70	Bureau of Land Management
988 South 7500 East Annex Building	170 South 500 East
Fort Duchesne, UT 84026	Vernal, UT 84078
(435) 722-4307	(435) 781-4400

#### **L. Other Information:**

##### **Onsite Specifics:**

- No changes

#### **Cultural and Paleontological Resources**

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BIA.



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#### Resource Reports:

A Class I literature survey report was completed on May 21, 2012 by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 12-152.

A paleontological reconnaissance survey was completed on April 10-16, 2012 by SWCA Environmental Consultants. For additional details please refer to report UT12-14314-98 and UT12-14314-122.

Biological field survey was completed on April 10-13, 2012 by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-768 and GCI-776.

#### Proposed Action Annual Emissions Tables:

Table 1: Proposed Action Annual Emissions (tons/year) <sup>1</sup>			
Pollutant	Development	Production	Total
NO <sub>x</sub>	3.8	0.12	3.92
CO	2.2	0.11	2.31
VOC	0.1	4.9	5
SO <sub>2</sub>	0.005	0.0043	0.0093
PM <sub>10</sub>	1.7	0.11	1.81
PM <sub>2.5</sub>	0.4	0.025	0.425
Benzene	2.2E-03	0.044	0.046
Toluene	1.6E-03	0.103	0.105
Ethylbenzene	3.4E-04	0.005	0.005
Xylene	1.1E-03	0.076	0.077
n-Hexane	1.7E-04	0.145	0.145
Formaldehyde	1.3E-02	8.64E-05	1.31E-02

<sup>1</sup> Emissions include 1 producing well and associated operations traffic during the year in which the project is developed

Table 2: Proposed Action versus 2012 WRAP Phase III Emissions Inventory Comparison			
Species	Proposed Action Production Emissions (ton/yr)	WRAP Phase III 2012 Uintah Basin Emission Inventory <sup>a</sup> (ton/yr)	Percentage of Proposed Action to WRAP Phase III
NO <sub>x</sub>	27.44	16,547	0.17%
VOC	35	127,495	0.03%

<sup>a</sup> [http://www.wrapair.org/forums/ogwg/PhaseIII\\_Inventory.html](http://www.wrapair.org/forums/ogwg/PhaseIII_Inventory.html)

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**M. Lessee's or Operators' Representative & Certification:**

Danielle Piernot  
Regulatory Analyst II  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6156

Tommy Thompson  
General Manager, Drilling  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6724


Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

  
Danielle Piernot

June 22, 2012

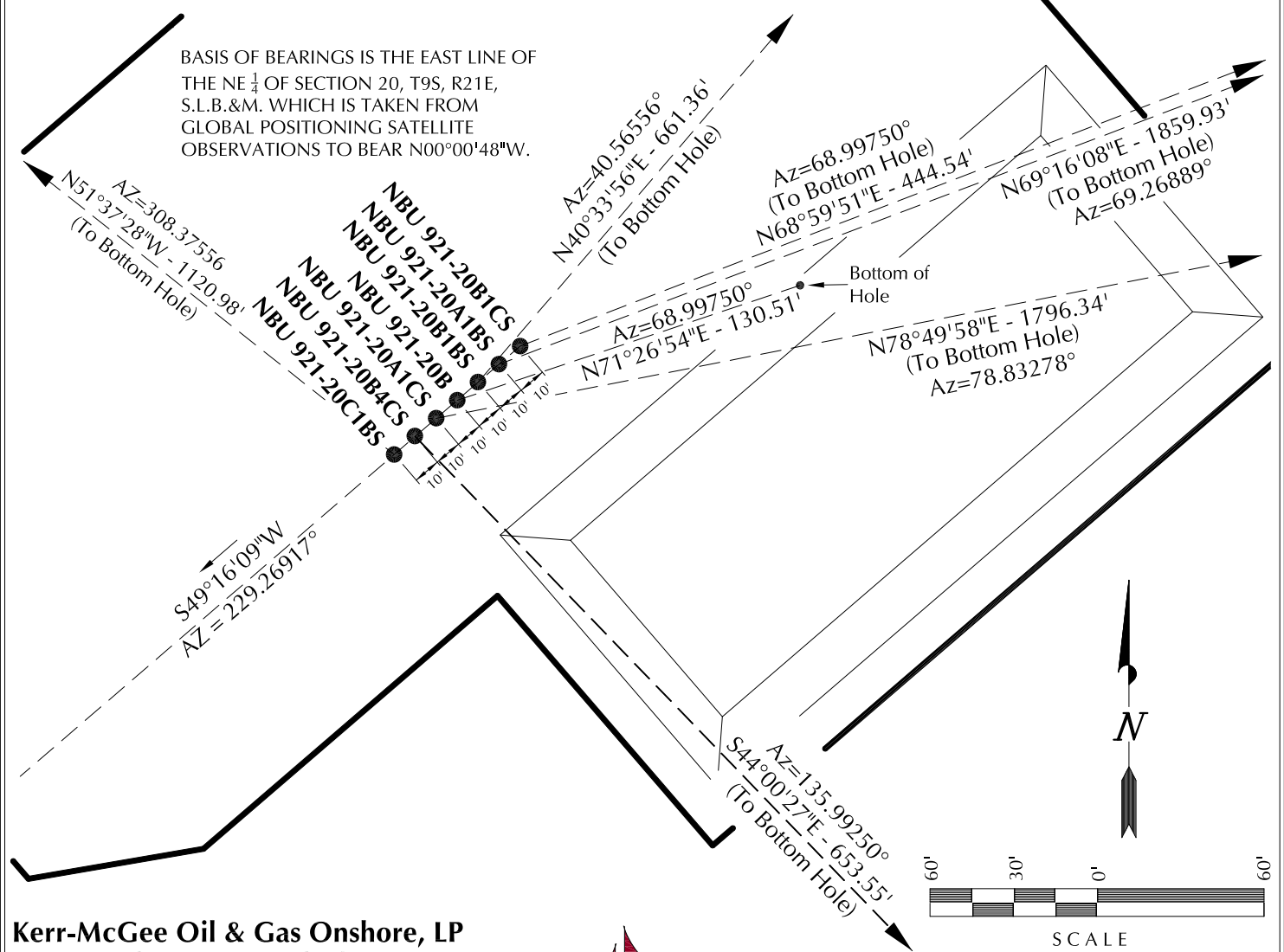
Date



WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 921-20B1CS	40°01'36.515"	109°34'26.779"	40°01'36.642"	109°34'24.296"	738' FNL	40°01'38.094"	109°34'21.448"	40°01'38.221"	109°34'18.965"	578' FNL
NBU 921-20A1BS	40.026810°	109.574105°	40.026845°	109.573416°	2223' FEL	40.027248°	109.572624°	40.027284°	109.571935°	1808' FEL
NBU 921-20B1BS	40°01'36.449"	109°34'26.876"	40°01'36.577"	109°34'24.394"	745' FNL	40°01'42.975"	109°34'04.531"	40°01'43.102"	109°34'02.049"	83' FNL
NBU 921-20B	40.026792°	109.574132°	40.026827°	109.573443°	2231' FEL	40.028604°	109.567925°	40.028640°	109.567236°	491' FEL
NBU 921-20B1CS	40°01'36.385"	109°34'26.973"	40°01'36.513"	109°34'24.491"	751' FNL	40°01'41.354"	109°34'21.454"	40°01'41.482"	109°34'18.972"	248' FNL
NBU 921-20B1BS	40.026774°	109.574159°	40.026809°	109.573470°	2238' FEL	40.028154°	109.572626°	40.028189°	109.571937°	1808' FEL
NBU 921-20B	40°01'36.321"	109°34'27.070"	40°01'36.448"	109°34'24.587"	758' FNL	40°01'36.733"	109°34'25.481"	40°01'36.860"	109°34'22.998"	716' FNL
NBU 921-20B	40.026756°	109.574186°	40.026791°	109.573497°	2246' FEL	40.026870°	109.573745°	40.026906°	109.573055°	2122' FEL
NBU 921-20A1CS	40°01'36.256"	109°34'27.168"	40°01'36.384"	109°34'24.686"	764' FNL	40°01'39.715"	109°34'04.525"	40°01'39.842"	109°34'02.044"	413' FNL
NBU 921-20B4CS	40°01'36.192"	109°34'27.265"	40°01'36.319"	109°34'24.783"	771' FNL	40°01'31.553"	109°34'21.423"	40°01'31.681"	109°34'18.940"	1240' FNL
NBU 921-20B4CS	40.026720°	109.574240°	40.026755°	109.573551°	2261' FEL	40.025431°	109.572617°	40.025467°	109.571928°	1807' FEL
NBU 921-20C1BS	40°01'36.127"	109°34'27.363"	40°01'36.255"	109°34'24.880"	777' FNL	40°01'42.992"	109°34'38.668"	40°01'43.119"	109°34'36.185"	83' FNL
NBU 921-20C1BS	40.026702°	109.574267°	40.026737°	109.573578°	2269' FEL	40.028609°	109.577408°	40.028644°	109.576718°	2136' FWL

## RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 921-20B1CS	159.3'	415.0'	NBU 921-20A1BS	658.4'	1739.5'	NBU 921-20B1BS	502.4'	430.1'	NBU 921-20B	41.5'	123.7'
NBU 921-20A1CS	347.9'	1762.3'	NBU 921-20B4CS	-470.1'	454.1'	NBU 921-20C1BS	695.9'	-878.8'			



**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 921-20B**

**WELL PAD INTERFERENCE PLAT**  
WELLS - NBU 921-20B1CS,  
NBU 921-20A1BS, NBU 921-20B1BS,  
NBU 921-20B, NBU 921-20A1CS,  
NBU 921-20B4CS & NBU 921-20C1BS  
LOCATED IN SECTION 20, T9S, R21E,  
S.L.B.&M., UTAH COUNTY, UTAH.



**CONSULTING, LLC**  
2155 North Main Street  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

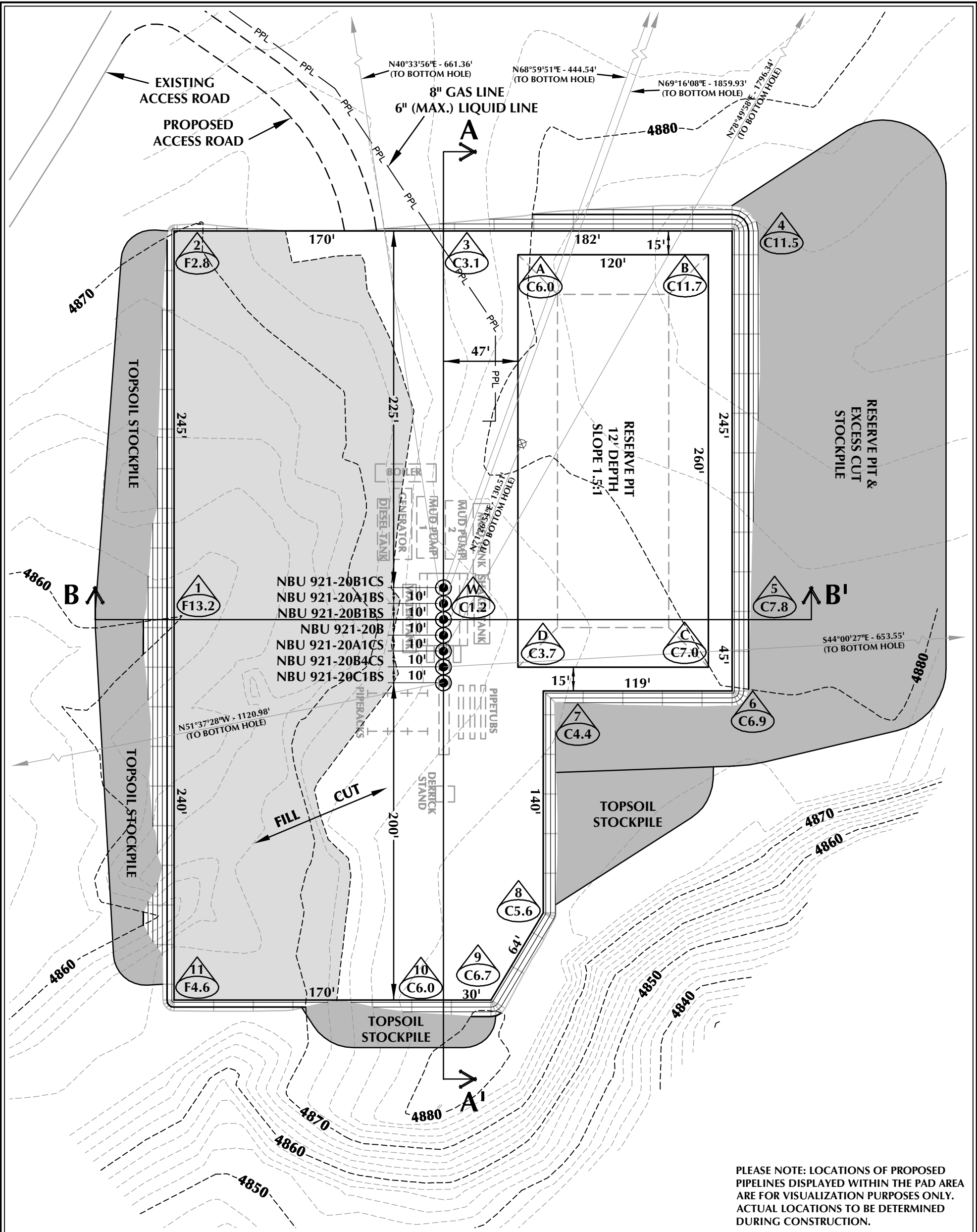
**TIMBERLINE**

(435) 789-1365


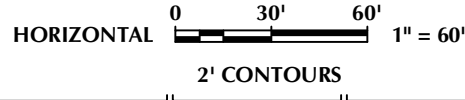

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 3-14-12	SURVEYED BY: A.F.	SHEET NO: <b>8</b> 8 OF 19
DATE DRAWN: 3-21-12	DRAWN BY: T.J.R.	
SCALE: 1" = 60'	Date Last Revised:	

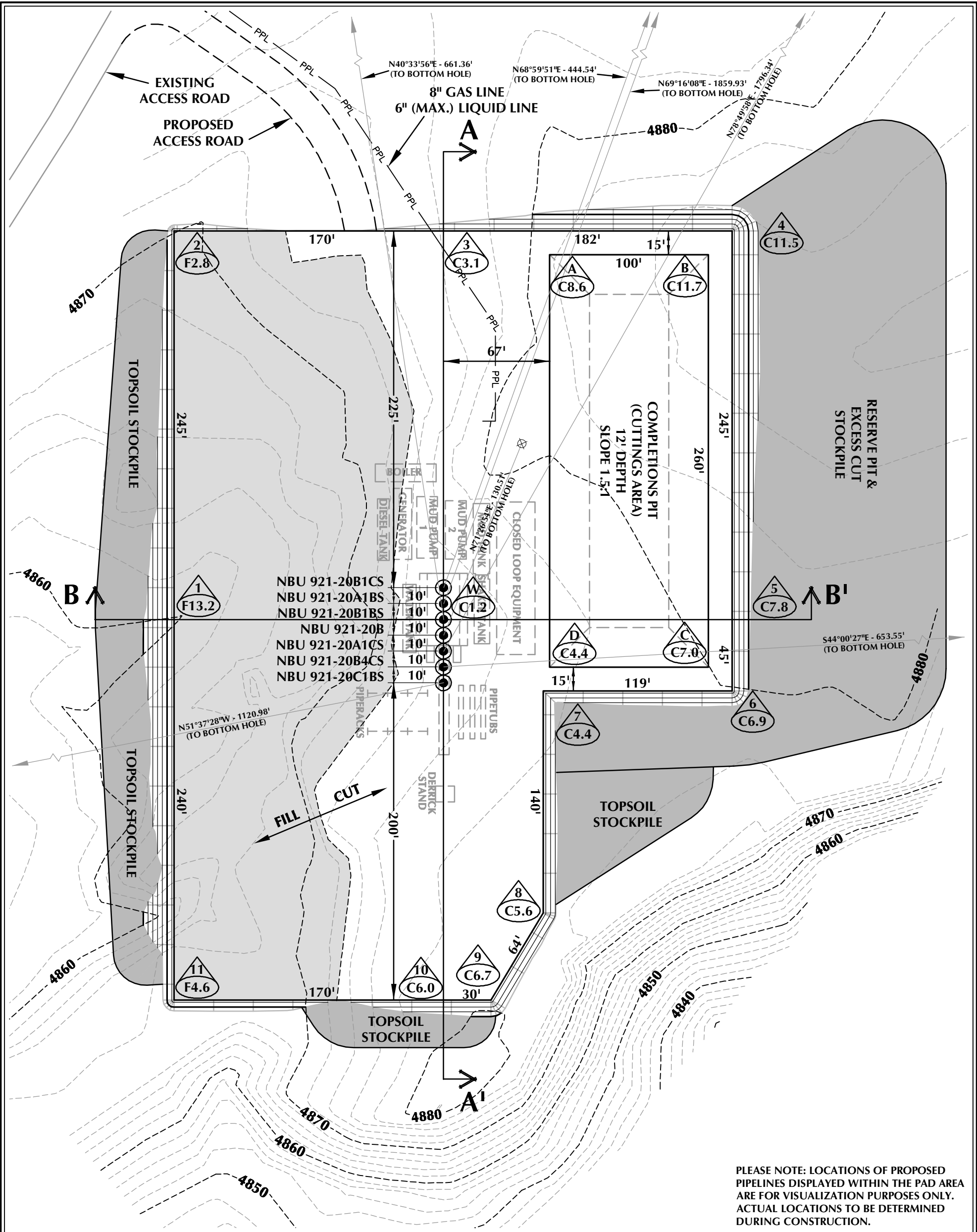




PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

WELL PAD - NBU 921-20B DESIGN SUMMARY		WELL PAD LEGEND	
<p>EXISTING GRADE @ CENTER OF WELL PAD = 4874.2' FINISHED GRADE ELEVATION = 4873.0' CUT SLOPES = 1.5:1 FILL SLOPES = 1.5:1 TOTAL WELL PAD AREA = 3.77 ACRES TOTAL DISTURBANCE AREA = 5.42 ACRES SHRINKAGE FACTOR = 1.10 SWELL FACTOR = 1.00</p> <p><b>Kerr-McGee Oil &amp; Gas Onshore, LP</b> 1099 18th Street - Denver, Colorado 80202</p>		<p><b>WELL PAD QUANTITIES</b> TOTAL CUT FOR WELL PAD = 17,592 C.Y. TOTAL FILL FOR WELL PAD = 14,969 C.Y. TOPSOIL @ 6" DEPTH = 3,039 C.Y. EXCESS MATERIAL = 2,623 C.Y.</p> <p><b>RESERVE PIT QUANTITIES</b> TOTAL CUT FOR RESERVE PIT +/- 11,020 C.Y. RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 42,290 BARRELS</p>	
<p><b>WELL PAD - NBU 921-20B</b></p> <p>WELL PAD - LOCATION LAYOUT NBU 921-20B1CS, NBU 921-20A1BS, NBU 921-20B1BS, NBU 921-20B, NBU 921-20A1CS, NBU 921-20B4CS &amp; NBU 921-20C1BS LOCATED IN SECTION 20, T9S, R21E, S.L.B.&amp;M., UINTAH COUNTY, UTAH</p>		<p></p> <p></p> <p>HORIZONTAL 0 30' 60' 1" = 60'</p>	
<p> CONSULTING, LLC 2155 North Main Street Sheridan, WY 82801 Phone 307-674-0609 Fax 307-674-0182</p>		<p><b>TIMBERLINE</b> (435) 789-1365 ENGINEERING &amp; LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078</p>	
		SCALE: 1"=60'	DATE: 4/17/12
		REVISD:	SHEET NO: <b>9</b> 9 OF 19





PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

WELL PAD - NBU 921-20B (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 4874.2'  
FINISHED GRADE ELEVATION = 4873.0'  
CUT SLOPES = 1.5:1  
FILL SLOPES = 1.5:1  
TOTAL WELL PAD AREA = 3.77 ACRES  
TOTAL DISTURBANCE AREA = 5.42 ACRES  
SHRINKAGE FACTOR = 1.10  
SWELL FACTOR = 1.00

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 17,592 C.Y.  
TOTAL FILL FOR WELL PAD = 14,969 C.Y.  
TOPSOIL @ 6" DEPTH = 3,039 C.Y.  
EXCESS MATERIAL = 2,623 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT  
+/- 8,870 C.Y.  
COMPLETIONS PIT CAPACITY  
(2' OF FREEBOARD)  
+/- 33,770 BARRELS

Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-20B

WELL PAD - LOCATION LAYOUT  
NBU 921-20B1CS,  
NBU 921-20A1BS, NBU 921-20B1BS,  
NBU 921-20B, NBU 921-20A1CS,  
NBU 921-20B4CS & NBU 921-20C1BS  
LOCATED IN SECTION 20, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC  
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Sheridan, WY 82801  
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ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL - PROPOSED PIPELINE
- EPL - EXISTING PIPELINE

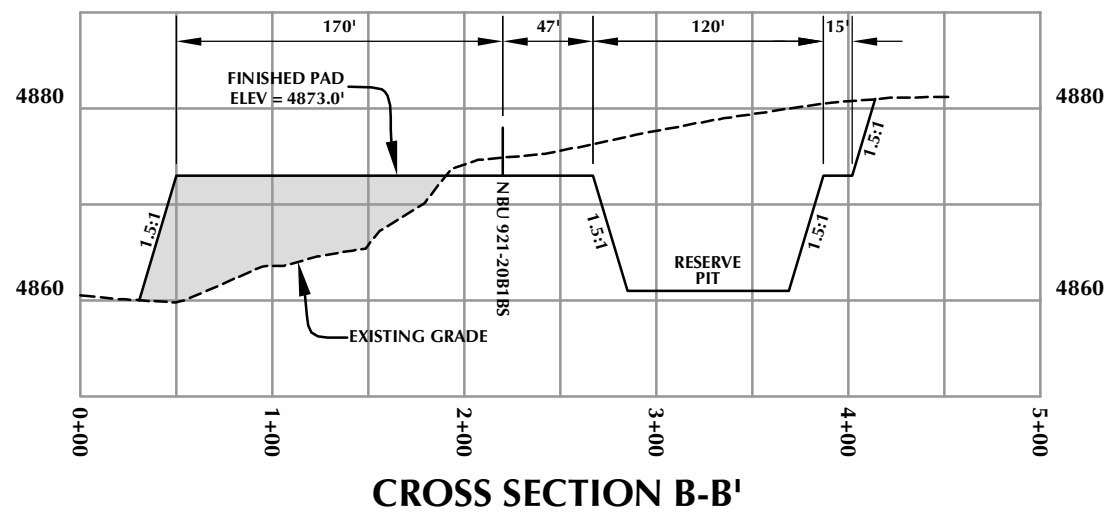
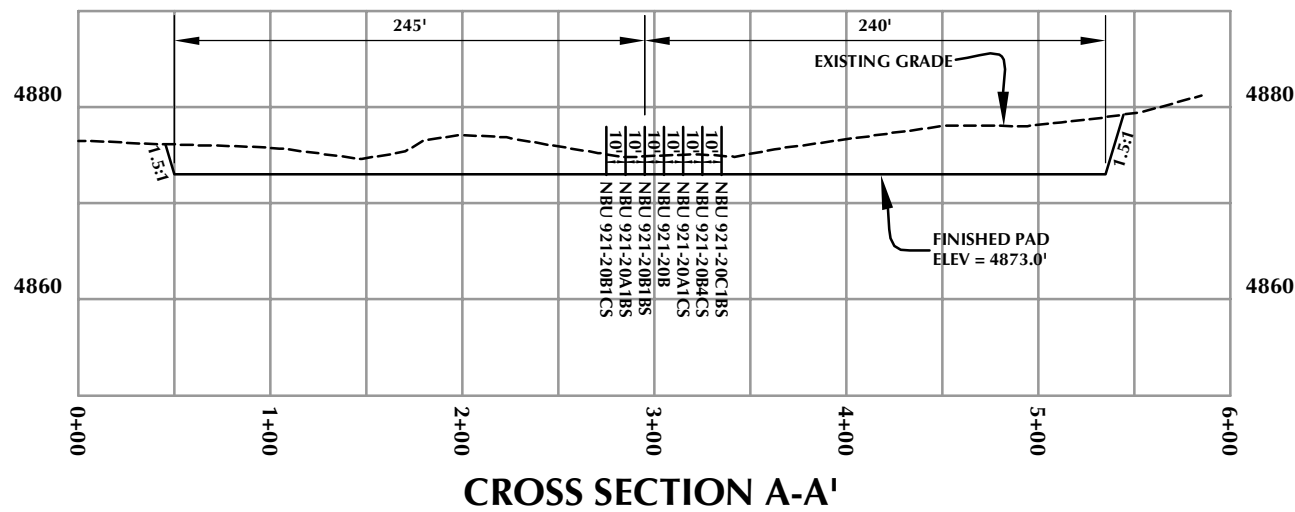


HORIZONTAL 0 30' 60' 1" = 60'  
2' CONTOURS

SCALE: 1"=60' DATE: 4/17/12 SHEET NO:

REVISED: 9B 9B OF 19





**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 921-20B**

**WELL PAD - CROSS SECTIONS**  
NBU 921-20B1CS,  
NBU 921-20A1BS, NBU 921-20B1BS,  
NBU 921-20B, NBU 921-20A1CS,  
NBU 921-20B4CS & NBU 921-20C1BS  
LOCATED IN SECTION 20, T9S, R21E,  
S.L.B.&M., UTAH COUNTY, UTAH



**CONSULTING, LLC**  
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Sheridan, WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

**TIMBERLINE**  
**ENGINEERING & LAND SURVEYING, INC.**  
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

**HORIZONTAL** 0 50' 100' 1" = 100'  
**VERTICAL** 0 10' 20' 1" = 20'

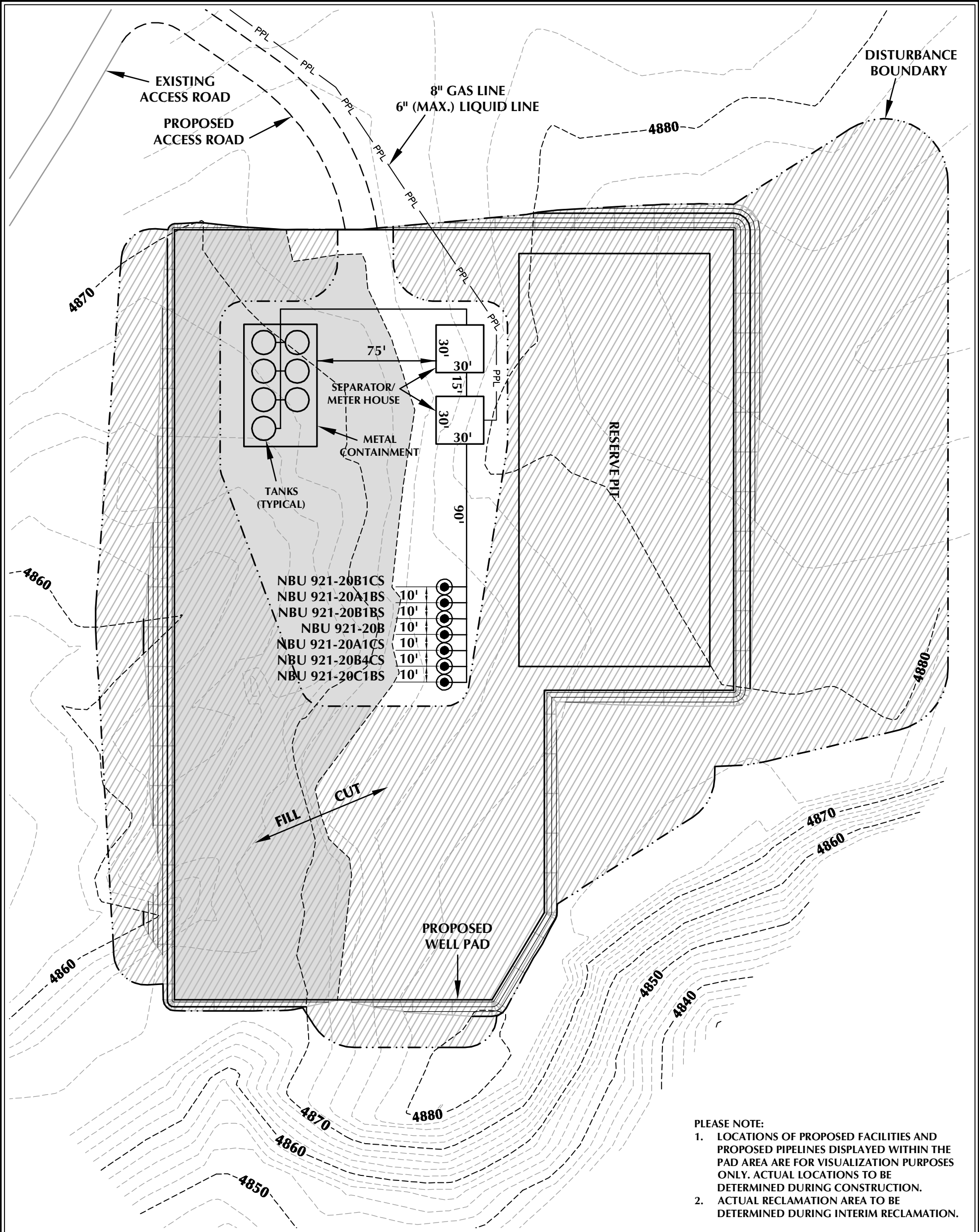
**Scale:** 1"=100' **Date:** 4/17/12  
**REVISED:**

**SHEET NO:**

**10** 10 OF 19

**RECEIVED: Jul. 26, 2012**





- PLEASE NOTE:
- LOCATIONS OF PROPOSED FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.
  - ACTUAL RECLAMATION AREA TO BE DETERMINED DURING INTERIM RECLAMATION.

WELL PAD - NBU 921-20B DESIGN SUMMARY

TOTAL DISTURBANCE AREA = 5.42 ACRES  
RECLAMATION AREA = 4.46 ACRES  
TOTAL WELL PAD AREA AFTER RECLAMATION = 0.96 ACRES

Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-20B

WELL PAD - RECLAMATION LAYOUT  
NBU 921-20B1CS,  
NBU 921-20A1BS, NBU 921-20B1BS,  
NBU 921-20B, NBU 921-20A1CS,  
NBU 921-20B4CS & NBU 921-20C1BS  
LOCATED IN SECTION 20, T9S, R21E,  
S.L.B.&M., Uintah County, Utah



CONSULTING, LLC  
2155 North Main Street  
Sheridan, WY 82801  
Phone 307-674-0609  
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209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL PROPOSED PIPELINE
- EPL EXISTING PIPELINE
- RECLAMATION AREA



HORIZONTAL 0 30' 60' 1" = 60'  
2' CONTOURS

SCALE: 1"=60' DATE: 4/17/12 SHEET NO: 11 11 OF 19

REVISED:



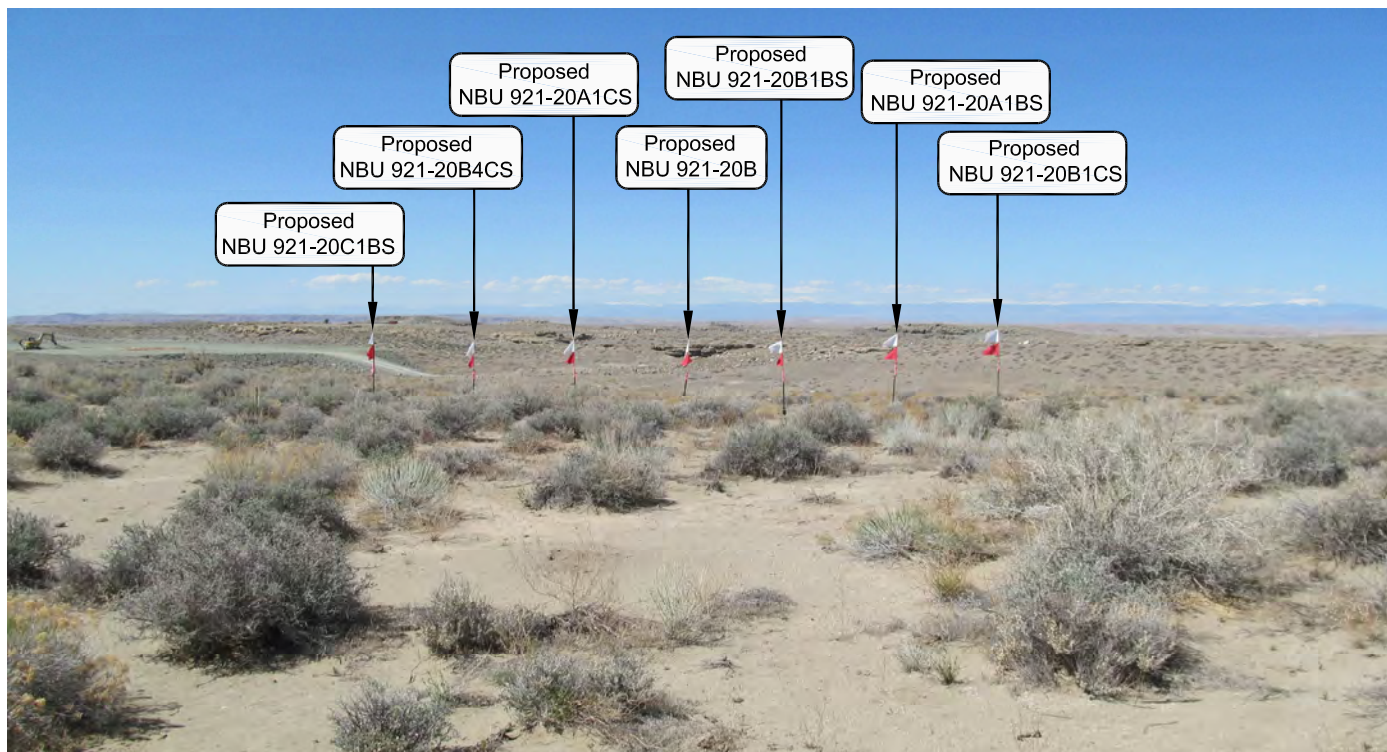


PHOTO VIEW: FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY

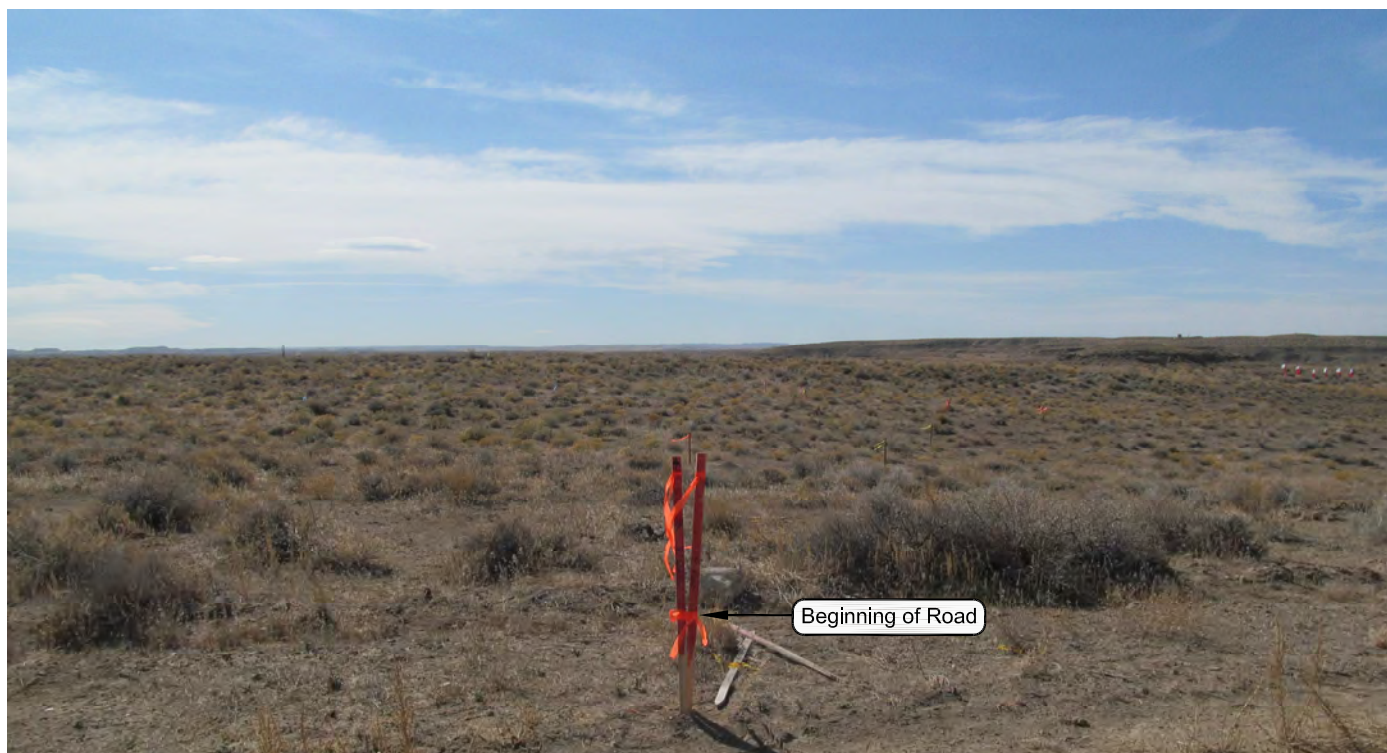


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: SOUTHERLY

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 921-20B**

LOCATION PHOTOS  
NBU 921-20B1CS,  
NBU 921-20A1BS, NBU 921-20B1BS,  
NBU 921-20B, NBU 921-20A1CS,  
NBU 921-20B4CS & NBU 921-20C1BS  
LOCATED IN SECTION 20, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH.



**CONSULTING, LLC**  
2155 North Main Street  
Sheridan WY 82801  
Phone 307-674-0609  
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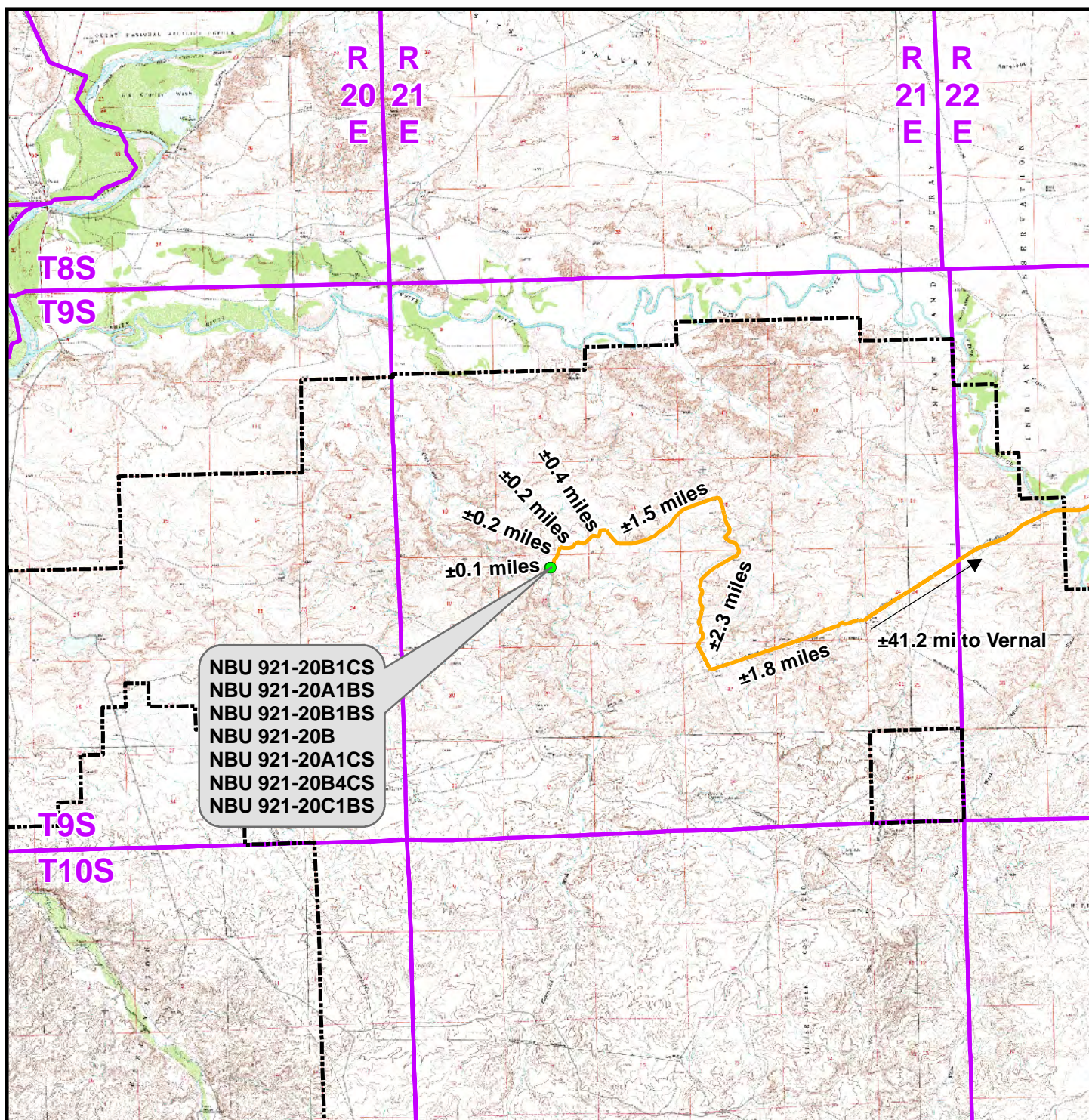
**TIMBERLINE**

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 3-14-12	PHOTOS TAKEN BY: A.F.	SHEET NO:  <b>12</b> 12 OF 19
DATE DRAWN: 3-21-12	DRAWN BY: T.J.R.	
Date Last Revised:		





### Legend

Distance From Well Pad - NBU 921-20B To Unit Boundary:  $\pm 11,312$ ft

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

### WELL PAD - NBU 921-20B

TOPO A  
NBU 921-20B1CS,  
NBU 921-20A1BS, NBU 921-20B1BS,  
NBU 921-20B, NBU 921-20A1CS,  
NBU 921-20B4CS & NBU 921-20C1BS  
LOCATED IN SECTION 20, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &  
Gas Onshore L.P.**

1099 18th Street  
Denver, Colorado 80202



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2155 North Main Street  
Sheridan, Wyoming 82801  
Phone 307-674-0609  
Fax 307-674-0182



SCALE: 1:100,000

NAD83 USP Central

SHEET NO:

DRAWN: TL

DATE: 17 Apr 2012

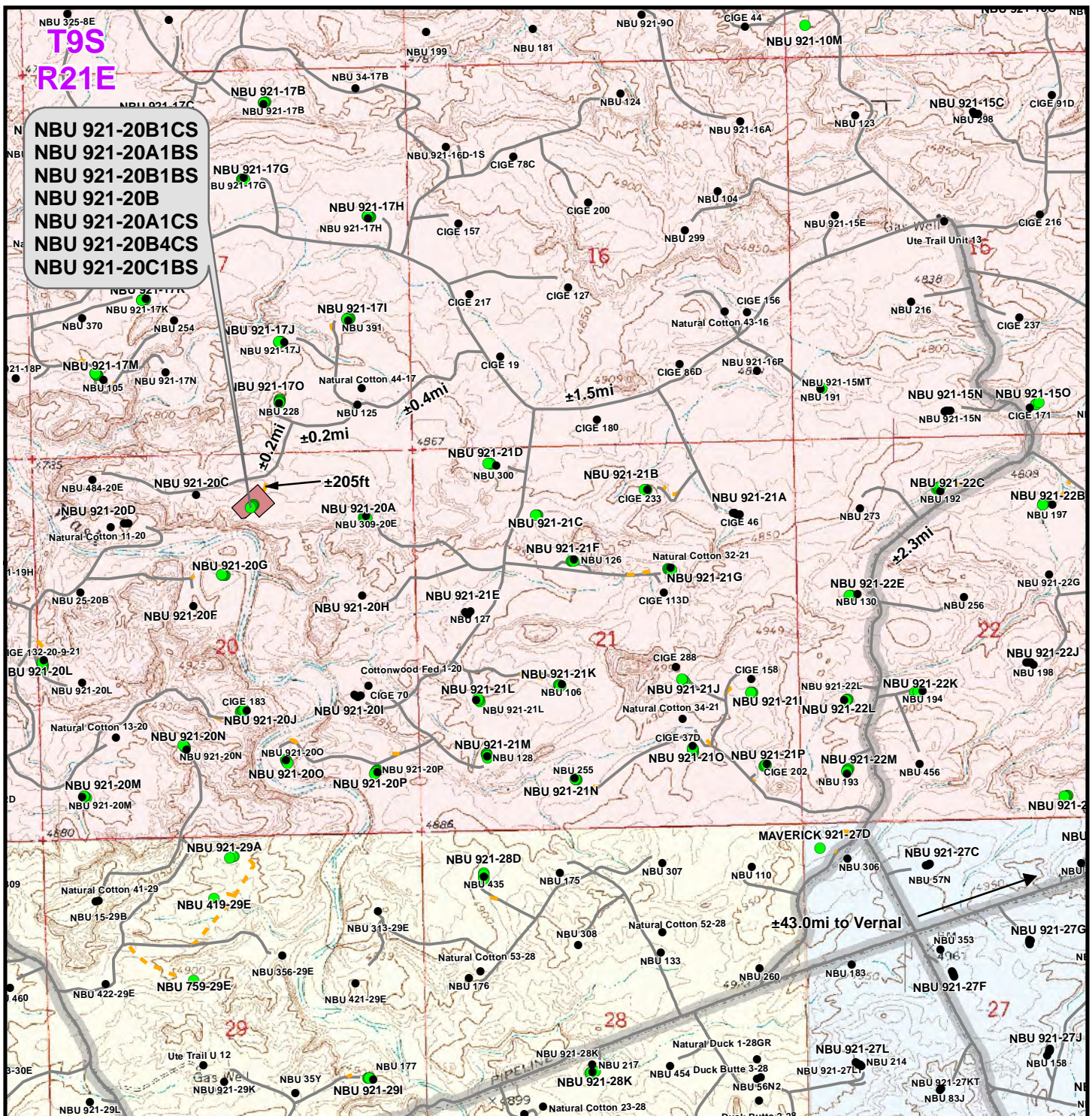
**13**

REVISED:

DATE:

13 OF 19





### Legend

- Well - Proposed     Well Pad    --- Road - Proposed     County Road     Bureau of Land Management     State
- Well - Existing    --- Road - Existing     Indian Reservation     Private

Total Proposed Road Length: ±205ft

### WELL PAD - NBU 921-20B

TOPO B  
NBU 921-20B1CS,  
NBU 921-20A1BS, NBU 921-20B1BS,  
NBU 921-20B, NBU 921-20A1CS,  
NBU 921-20B4CS & NBU 921-20C1BS  
LOCATED IN SECTION 20, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &  
Gas Onshore L.P.**

1099 18th Street  
Denver, Colorado 80202



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Sheridan, Wyoming 82801  
Phone 307-674-0609  
Fax 307-674-0182

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

NAD83 USP Central

DATE: 17 Apr 2012

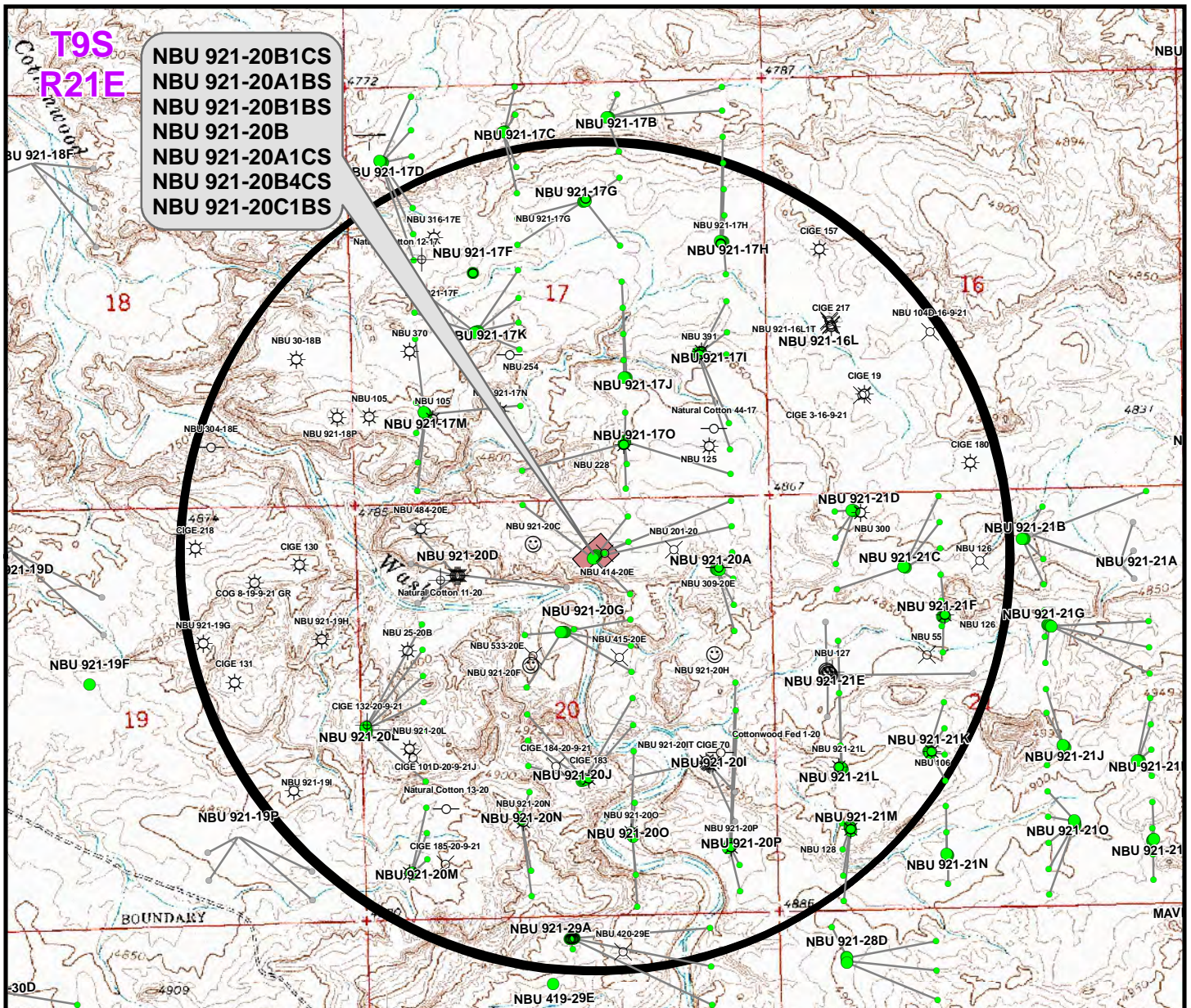
DATE:

SHEET NO:

**14**

14 OF 19





Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
NBU 921-20B1CS	NBU 921-20B3CS BH	982ft
NBU 921-20A1BS	NBU 125	750ft
NBU 921-20B1BS	NBU 228	908ft
NBU 921-20B	NBU 921-20B3CS BH	655ft
NBU 921-20A1CS	NBU 309-20E	545ft
NBU 921-20B4CS	NBU 921-20B3CS BH	811ft
NBU 921-20C1BS	NBU 921-20C	520ft

### Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Well - 1 Mile Radius
- ☀ Producing
- ☺ Spudded
- APD Approved
- ⊙ Preliminary Location
- ⊕ Deferred
- ✕ Cancelled
- ⊖ Temporarily Abandoned
- ☀ Active Injector
- ⊕ Plugged & Abandoned
- ✕ Location Abandoned
- ⊖ Shut-In

### WELL PAD - NBU 921-20B

TOPO C  
NBU 921-20B1CS,  
NBU 921-20A1BS, NBU 921-20B1BS,  
NBU 921-20B, NBU 921-20A1CS,  
NBU 921-20B4CS & NBU 921-20C1BS  
LOCATED IN SECTION 20, T9S, R21E,  
S.L.B.&M., Uintah County, Utah

**Kerr-McGee Oil &  
Gas Onshore L.P.**

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SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

NAD83 USP Central

DATE: 17 Apr 2012

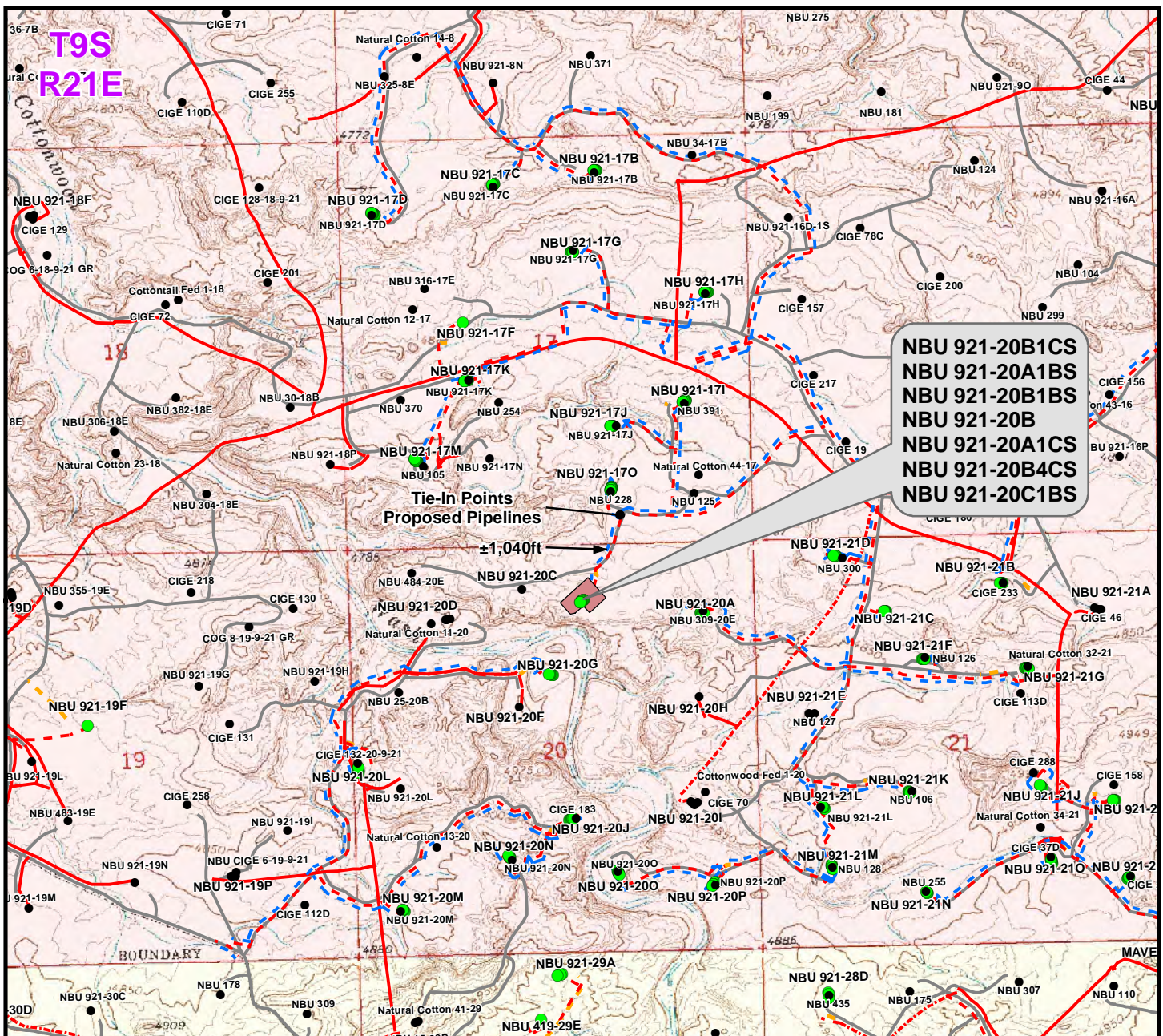
DATE:

SHEET NO:

**15**

15 OF 19





NBU 921-20B1CS  
NBU 921-20A1BS  
NBU 921-20B1BS  
NBU 921-20B  
NBU 921-20A1CS  
NBU 921-20B4CS  
NBU 921-20C1BS

Tie-In Points  
Proposed Pipelines

±1,040ft

Proposed Liquid Pipeline	Length
=====	
Buried 6" (Max.) (Meter House to Edge of Pad)	±140ft
Buried 6" (Max.) (Edge of Pad to 921-170 Intersection)	±1,040ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±1,180ft</b>

Proposed Gas Pipeline	Length
=====	
Buried 8" (Meter House to Edge of Pad)	±140ft
Buried 8" (Edge of Pad to 921-170 Intersection)	±1,040ft
<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±1,180ft</b>

### Legend

● Well - Proposed	- - - Gas Pipeline - Proposed	- - - Liquid Pipeline - Proposed	- - - Road - Proposed	■ Bureau of Land Management	■ State
● Well - Existing	- - - Gas Pipeline - To Be Upgraded	- - - Liquid Pipeline - Existing	- - - Road - Existing	■ Indian Reservation	■ Private
■ Well Pad	- - - Gas Pipeline - Existing				

### WELL PAD - NBU 921-20B

TOPO D  
NBU 921-20B1CS,  
NBU 921-20A1BS, NBU 921-20B1BS,  
NBU 921-20B, NBU 921-20A1CS,  
NBU 921-20B4CS & NBU 921-20C1BS  
LOCATED IN SECTION 20, T9S, R21E,  
S.L.B.&M., Uintah County, Utah

**Kerr-McGee Oil &  
Gas Onshore L.P.**

1099 18th Street  
Denver, Colorado 80202



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Sheridan, Wyoming 82801  
Phone 307-674-0609  
Fax 307-674-0182

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

NAD83 USP Central

DATE: 17 Apr 2012

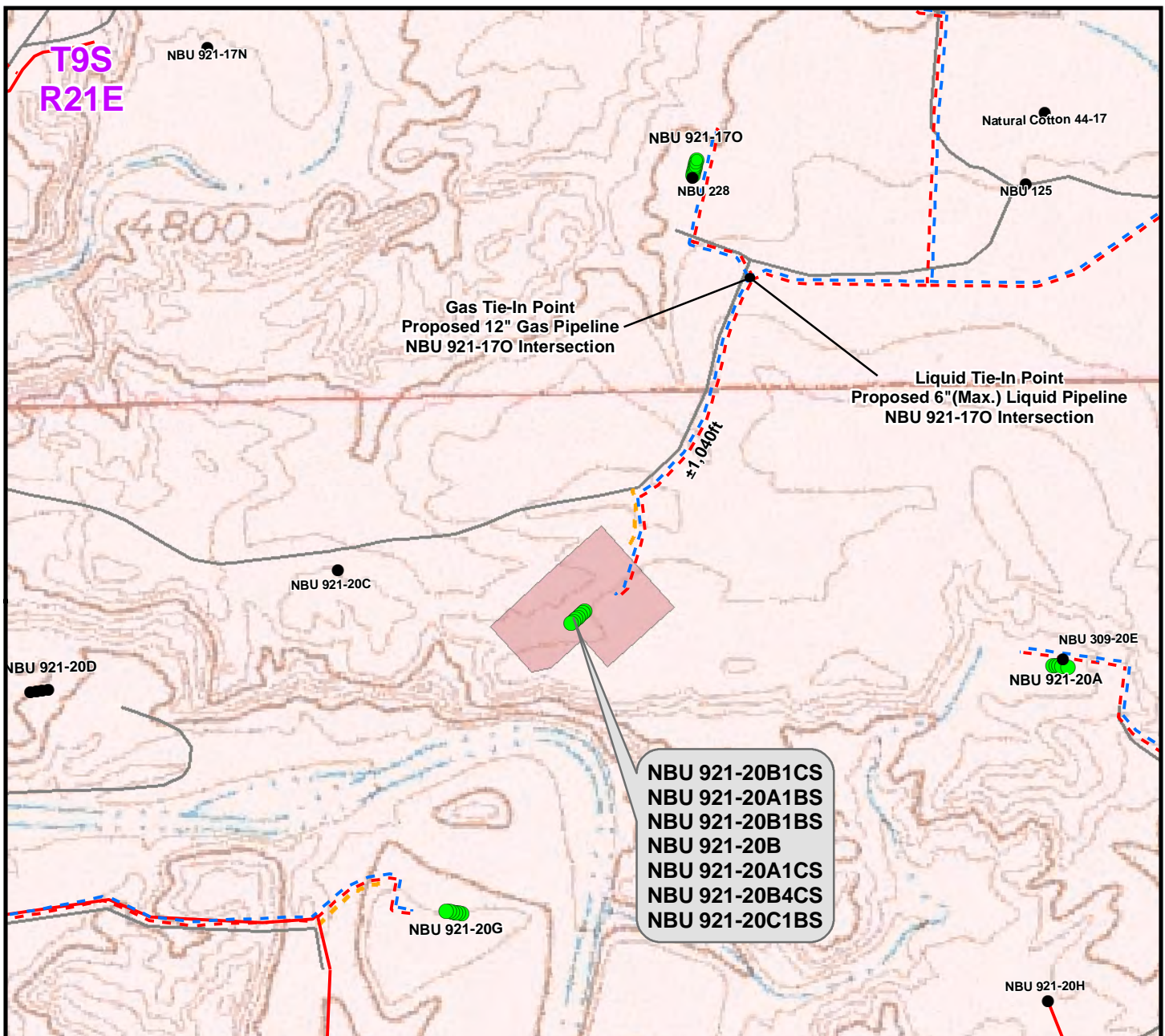
DATE:

SHEET NO:

**16**

16 OF 19





Proposed Liquid Pipeline	Length
Buried 6"(Max.) (Meter House to Edge of Pad)	±140ft
Buried 6"(Max.) (Edge of Pad to 921-170 Intersection)	±1,040ft
<b>TOTAL PROPOSED BURIED LIQUID PIPELINE =</b>	<b>±1,180ft</b>

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±140ft
Buried 8" (Edge of Pad to 921-170 Intersection)	±1,040ft
<b>TOTAL PROPOSED BURIED GAS PIPELINE =</b>	<b>±1,180ft</b>

### Legend

● Well - Proposed	■ Well Pad - Proposed	- - - Gas Pipeline - Proposed	- - - Liquid Pipeline - Proposed	- - - Road - Proposed	■ Bureau of Land Management
● Well - Existing	■ Well Pad - Existing	- - - Gas Pipeline - To Be Upgraded	- - - Liquid Pipeline - Existing	- - - Road - Existing	■ Indian Reservation
		- - - Gas Pipeline - Existing			■ State
					■ Private

### WELL PAD - NBU 921-20B

TOPO D2 (PAD & PIPELINE DETAIL)  
NBU 921-20B1CS,  
NBU 921-20A1BS, NBU 921-20B1BS,  
NBU 921-20B, NBU 921-20A1CS,  
NBU 921-20B4CS & NBU 921-20C1BS  
LOCATED IN SECTION 20, T9S, R21E,  
S.L.B.&M., UTAH COUNTY, UTAH

### Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street  
Denver, Colorado 80202



### CONSULTING, LLC

2155 North Main Street  
Sheridan, Wyoming 82801  
Phone 307-674-0609  
Fax 307-674-0182



SCALE: 1" = 500ft

DRAWN: TL

REVISED:

NAD83 USP Central

DATE: 17 Apr 2012

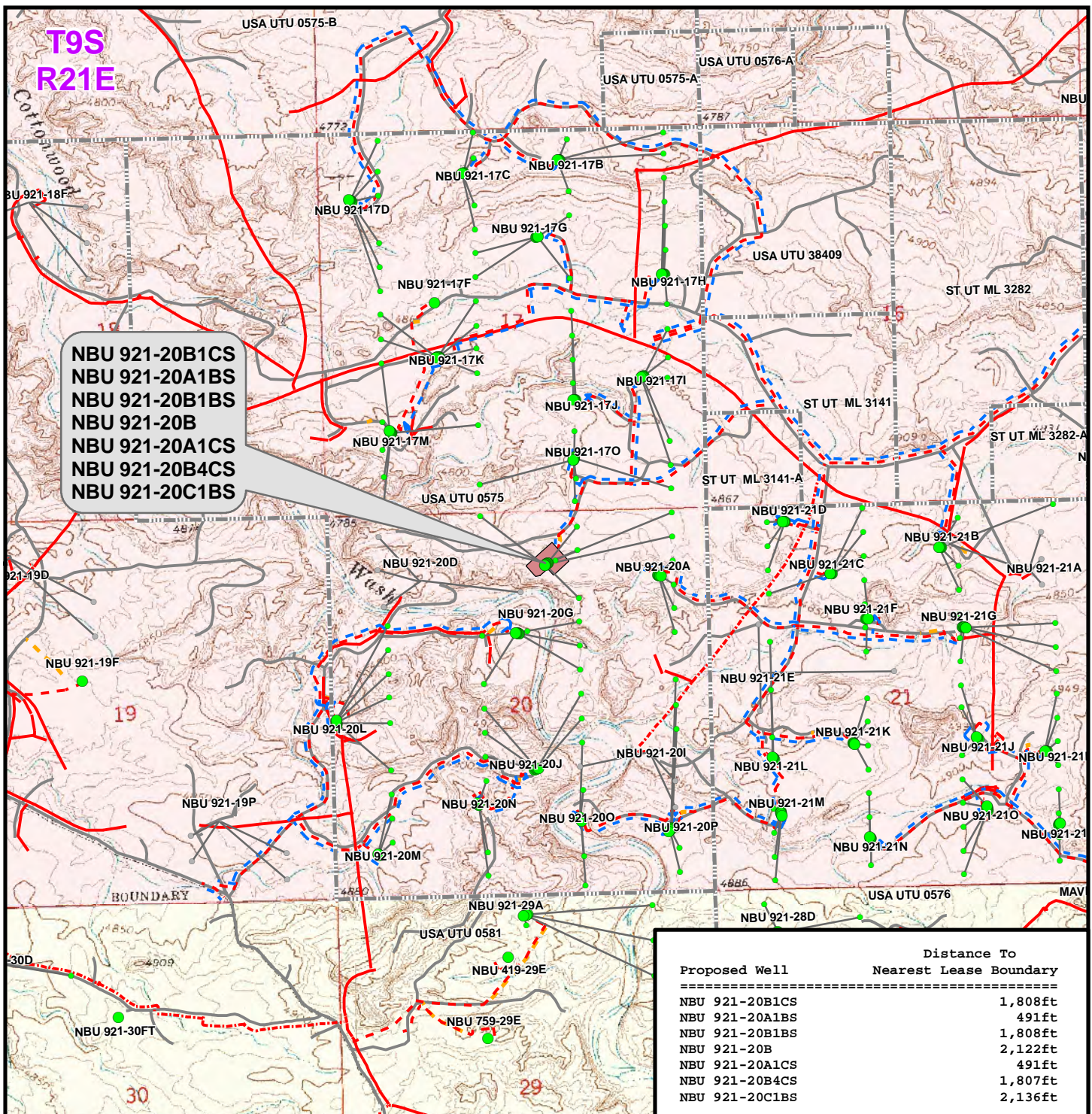
DATE:

SHEET NO:

**17**

17 OF 19





## Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- ▬ Lease Boundary
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

## WELL PAD - NBU 921-20B

TOPO E  
 NBU 921-20B1CS,  
 NBU 921-20A1BS, NBU 921-20B1BS,  
 NBU 921-20B, NBU 921-20A1CS,  
 NBU 921-20B4CS & NBU 921-20C1BS  
 LOCATED IN SECTION 20, T9S, R21E,  
 S.L.B.&M., UINTAH COUNTY, UTAH

Kerr-McGee Oil &  
Gas Onshore L.P.

1099 18th Street  
 Denver, Colorado 80202



## CONSULTING, LLC

2155 North Main Street  
 Sheridan, Wyoming 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

NAD83 USP Central

DATE: 17 Apr 2012

DATE:

SHEET NO:

18

18 OF 19





ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.

**Paleontological Assessment for  
NBU 921-20B  
Uintah County, Utah**

Prepared for

**Anadarko Petroleum Corporation  
and  
Ute and Ouray Indian Tribe**

Prepared by

**SWCA Environmental Consultants**

**April 2012**



CLASS I REVIEW OF KERR-MCGEE OIL AND GAS  
ONSHORE LP'S 49 PROPOSED WELL LOCATIONS  
IN TOWNSHIP 9S, RANGE 21E, SECTION 20  
(MOAC REPORT NO. 12-152)  
UINTAH COUNTY, UTAH

By:

Jacki A. Montgomery

Prepared For:

Ute Indian Tribe  
Uintah-Ouray Agency

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP  
1368 South 1200 East  
Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc.  
P.O. Box 219  
Moab, Utah 84532

MOAC Report No. 12-152

May 21, 2012

United States Department of Interior (FLPMA)  
Permit No. 12-UT-60122

Ute Tribal Permit No. A012-363

**RECEIVED: Jul. 26, 2012**





## Grasslands Consulting, Inc.

611 Corporate Circle, Unit H, Golden, CO 80401  
(303) 759-5377 Office (303) 759-5324 Fax

### SPECIAL STATUS SPECIES REPORT

**Report Number:** GCI #768

**Report Date:** April 24, 2012

**Operator:** Kerr-McGee Oil & Gas Onshore, LP

**Operator Contact:** Danielle Piernot (Danielle.Piernot@anadarko.com; 720-929-6156)

**Proposed Project:** NBU 921-20B (including pipeline, access road, and well pad to accommodate the NBU 921-20B1CS, NBU 921-20A1BS, NBU 921-20B1BS, NBU 921-20B, NBU 921-20A1CS, NBU 921-20B4CS, and NBU 921-20C1BS well bores)

**Well Pad Location:** NW ¼ of the NE ¼ of Section 20, Township 9 South, Range 21 East, Uintah County, Utah

**Survey Species:** Uinta Basin hookless cactus (*Sclerocactus wetlandicus*), Spanish bayonet (*Yucca sterilis*), and noxious weeds

**Survey Dates:** April 16, 17, and 18, 2012

**Observers:** Grasslands Consulting, Inc. biologists Dan Hamilton, Adrienne Cunningham, Jon Sexauer, Josh Christensen, Liana Cabiles, Kyle Flesness, Mike Wilder, and field technicians



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-20B
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0758 FNL 2246 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 20 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047507150000
<b>PHONE NUMBER:</b> 720 929-6516		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>9/20/2012</b>	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> <b>APD EXTENSION</b> OTHER: <input style="width: 100px;" type="text"/>
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:			
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:			
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: September 13, 2012

By:

<b>NAME (PLEASE PRINT)</b> Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 9/13/2012	





The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Request for Permit Extension Validation Well Number 43047507150000**

API: 43047507150000

Well Name: NBU 921-20B

Location: 0758 FNL 2246 FEL QTR NWNE SEC 20 TWP 090S RNG 210E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date Original Permit Issued: 9/21/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☒ Yes ☐ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

Signature: Danielle Piernot

Date: 9/13/2012

Title: Regulatory Analyst Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

**RECEIVED: Sep. 13, 2012**



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-20B
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0758 FNL 2246 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 20 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047507150000
<b>5. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>9/21/2013</b>	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> <b>APD EXTENSION</b> OTHER: <input style="width: 100px;" type="text"/>
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:			
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:			
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: September 12, 2013

By:

<b>NAME (PLEASE PRINT)</b> Teena Paulo	<b>PHONE NUMBER</b> 720 929-6236	<b>TITLE</b> Staff Regulatory Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 9/4/2013	





**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices**

**Request for Permit Extension Validation Well Number 43047507150000**

**API:** 43047507150000

**Well Name:** NBU 921-20B

**Location:** 0758 FNL 2246 FEL QTR NWNE SEC 20 TWNP 090S RNG 210E MER S

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**Date Original Permit Issued:** 9/21/2009

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- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Signature:** Teena Paulo

**Date:** 9/4/2013

**Title:** Staff Regulatory Specialist **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-20B
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0758 FNL 2246 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 20 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047507150000
<b>PHONE NUMBER:</b> 720 929-6514		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 11/8/2013	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Spud well 11/08/2013 @ 16:00. Drill 24" conductor hole to 40', run 14" X .250 wall conductor pipe, cement with 81 sacks ready mix. Anticipated surface spud date and surface casing cement 11/22/2013.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> November 12, 2013		
<b>NAME (PLEASE PRINT)</b> Doreen Green	<b>PHONE NUMBER</b> 435 781-9758	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 11/11/2013	



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

SEP 23 2013

FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*

BLM

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. UTU0575
2. Name of Operator KERR MCGEE OIL & GAS ONSHORE		6. If Indian, Allottee or Tribe Name
Contact: TEENA PAULO Email: teena.paulo@anadarko.com		7. If Unit or CA/Agreement, Name and/or No. 891008900A
3a. Address 1368 SOUTH 1200 EAST VERNAL, UT 84078	3b. Phone No. (include area code) Ph: 720-929-6236 Fx: 720-929-7236	8. Well Name and No. NBU 921-20B
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 20 T9S R21E NWNE 758FNL 2246FEL 40.026756 N Lat, 109.574186 W Lon		9. API Well No. 43-047-50715-00-X1
		10. Field and Pool, or Exploratory NATURAL BUTTES
		11. County or Parish, and State UINTAH COUNTY, UT

NOV 14 2013

OIL &amp; GAS MINING

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original APD
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

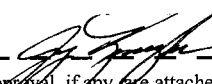
The operator respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

VERNAL FIELD OFFICE	
ENG.	RPH 10/24/13
GEOLOG.	
E.S.	
PET.	
RECL.	

CONDITIONS OF APPROVAL ATTACHED

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #220861 verified by the BLM Well Information System For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal Committed to AFMSS for processing by LESLIE BUHLER on 09/24/2013 (13LBB2023SE)	
Name (Printed/Typed) TEENA PAULO	Title STAFF REGULATORY SPECIALIST
Signature (Electronic Submission)	Date 09/23/2013

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By 	Title Assistant Field Manager Lands & Mineral Resources	Date OCT 29 2013
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		
Office VERNAL FIELD OFFICE		

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\*

UDCGH



## Revisions to Operator-Submitted EC Data for Sundry Notice #220861

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	OTHER NOI	APDCH NOI
Lease:	UTU0575	UTU0575
Agreement:	UTU63047A	891008900A (UTU63047A)
Operator:	KERR-MCGEE OIL & GAS ONSHORE L 1099 18TH STREET SUITE 1800 DENVER, CO 80202 Ph: 720-929-6000	KERR MCGEE OIL & GAS ONSHORE L 1368 SOUTH 1200 EAST VERNAL, UT 84078 Ph: 435.789.3995
Admin Contact:	TEENA PAULO STAFF REGULATORY SPECIALIST E-Mail: teena.paulo@anadarko.com  Ph: 720-929-6236 Fx: 720-929-7236	TEENA PAULO STAFF REGULATORY SPECIALIST E-Mail: teena.paulo@anadarko.com  Ph: 720-929-6236 Fx: 720-929-7236
Tech Contact:	TEENA PAULO STAFF REGULATORY SPECIALIST E-Mail: teena.paulo@anadarko.com  Ph: 720-929-6236 Fx: 720-929-7236	TEENA PAULO STAFF REGULATORY SPECIALIST E-Mail: teena.paulo@anadarko.com  Ph: 720-929-6236 Fx: 720-929-7236
Location:		
State:	UT	UT
County:	UINTAH	UINTAH
Field/Pool:	NATURAL BUTTES	NATURAL BUTTES
Well/Facility:	NBU 921-20B Sec 20 T09S R21E Mer SLB NWNE 758FNL 2246FEL	NBU 921-20B Sec 20 T9S R21E NWNE 758FNL 2246FEL 40.026756 N Lat, 109.574186 W Lon



# **CONDITIONS OF APPROVAL**

## **Kerr McGee Oil and Gas Onshore LP.**

### **Notice of Intent APD Extension**

**Lease:** UTU-0575  
**Well:** NBU 921-20B  
**Location:** NWE Sec 20-T9S-R21E

An extension for the referenced APD is granted with the following conditions:

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1. The extension and APD shall expire on 11/16/2015.
2. No other extension shall be granted.

If you have any other questions concerning this matter, please contact Robin L Hansen of this office at (435) 781-2777



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-20B
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0758 FNL 2246 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 20 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047507150000
<b>PHONE NUMBER:</b> 720 929-6100		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> Uintah		<b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 4/2/2014	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 Started completing the well. Well TD at 10,344 ft.

Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
**FOR RECORD ONLY**  
 April 08, 2014

<b>NAME (PLEASE PRINT)</b> Kay E. Kelly	<b>PHONE NUMBER</b> 720 929 6582	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/2/2014	



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-20B
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0758 FNL 2246 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NWNE Section: 20 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047507150000
<b>10. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input checked="" type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER	
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 5/19/2014	<input type="checkbox"/> SPUD REPORT Date of Spud:	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. The NBU 921-20B was placed on production 05/19/2014 after a new well completion. Producing from the MESAVERDE.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> May 20, 2014		
<b>NAME (PLEASE PRINT)</b> Doreen Green	<b>PHONE NUMBER</b> 435 781-9758	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 5/19/2014	



Form 3160-4  
(August 2007)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other b. Type of Completion <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> Diff. Resvr. Other _____				5. Lease Serial No. UTU0575	
2. Name of Operator KERR-MCGEE OIL AND GAS ONSHORE Contact: ILA BEALE Email: ila.beale@anadarko.com				6. If Indian, Allottee or Tribe Name	
3. Address   P.O. BOX 173779 DENVER, CO 82017				7. Unit or CA Agreement Name and No. UTU63047A	
3a. Phone No. (include area code) Ph: 720-929-6000				8. Lease Name and Well No. NBU 921-20B	
4. Location of Well (Report location clearly and in accordance with Federal requirements)*  At surface   NWNE 758FNL 2246FEL 40.026756 N Lat, 109.574186 W Lon  At top prod interval reported below   NWNE 704FNL 2121FEL  At total depth   NWNE 713FNL 2105FEL				9. API Well No.  43-047-50715	
10. Field and Pool, or Exploratory NATURAL BUTTES				11. Sec., T., R., M., or Block and Survey or Area   Sec 20 T9S R21E Mer SLB	
12. County or Parish UINTAH				13. State UT	
14. Date Spudded 11/08/2013		15. Date T.D. Reached 01/30/2014		16. Date Completed <input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod. 05/19/2014	
17. Elevations (DF, KB, RT, GL)* 4897 KB					
18. Total Depth:   MD 10344 TVD 10340		19. Plug Back T.D.:   MD 10272 TVD 10268		20. Depth Bridge Plug Set:   MD TVD	
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) RADIAL CBL/GR/CCL/TEMP-COMPACT TRIPLE COMBO QUICKL				22. Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Directional Survey? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Submit analysis)	

## 23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
24.000	14.000 STL	36.7	0	40		81			
11.000	8.625 J55	28.0	24	3009		625		0	
7.875	4.500 I-80	11.6	24	4941		2010		714	
7.875	4.500 P-110	11.6	4941	10318					

## 24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	9673							

## 25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MESAVERDE	8115	10227	8115 TO 10227	0.400	192	OPEN
B)						
C)						
D)						

## 26. Perforation Record

## 27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
8115 TO 10227	PUMP 9,343 BBL SLICKWATER, 48 BBLS 15% HCL ACID, AND 185,691 LBS 30/50 MESH SAND

## 28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
05/19/2014	05/23/2014	24		48.0	2366.0	0.0			FLows FROM WELL
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	SI 1142	1966.0		48	2366	0		PGW	

## 28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
	SI								

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #248619 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

RECEIVED: Jun. 06, 2014



28b. Production - Interval C									
Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

28c. Production - Interval D									
Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

29. Disposition of Gas(*Sold, used for fuel, vented, etc.*)  
**SOLD**

30. Summary of Porous Zones (Include Aquifers):				31. Formation (Log) Markers	
Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.					
Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1756 2045 2496 5109 8106

32. Additional remarks (include plugging procedure):  
The first 210 ft. of the surface hole was drilled with a 12 ? in. bit. The remainder of the surface hole was drilled with an 11 in. bit. A DV tool was placed in the well from 5274 feet to 5277 feet. DQX csg was run from surface to 4964 ft.; LTC csg was run from 4964 ft. to 10,318 ft. Attached is the chronological well history, perforation report and final survey.

33. Circle enclosed attachments:

- |   |                    |               |                       |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.)     | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis   | 7 Other:      |                       |

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

**Electronic Submission #248619 Verified by the BLM Well Information System.  
For KERR-MCGEE OIL AND GAS ONSHORE, sent to the Vernal**

Name(*please print*) ILA BEALE Title STAFF REGULATORY SPECIALIST

Signature \_\_\_\_\_ (Electronic Submission) Date 06/06/2014

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\***

**RECEIVED: Jun. 06, 2014**



US ROCKIES REGION  
Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
12/2/2013	12:00 - 17:00	5.00	MIRU	01	B	P	64	FINISH TOP JOB ON PREVIOUS WELL. SKID RIG 20' RIG UP SET MATTING BOARD. SET RIG IN PLACE, CATWALK, PIPE RACKS, PLACE BOTTOM HOLE ASSEMBLY.  PRE SPUD JOB SAFETY MEETING REVIEW DIRECTIONAL PLANS AND PLATS AND VERIFY LAT/LONGS AND WELL ORDER VERIFY DIRECTIONAL DRILLERS PLAN IS THE MOST RECENT AND APPROVED VERSION REFERENCE WELLBORE DIAGRAMS FOR EXACT CASING DESIGN AND GENERAL OVERVIEW OF WELLBORE, PRIOR TO SPUD. FINISH PICKING UP BHA.
	17:00 - 18:30	1.50	DRLSUR	02	B	P	64	PICK UP NOV 1.83 DEGREE BENT MOTOR (RUN # 3) .17 REV/GAL PICK UP 12 1/4" DRILL BIT . SPUD @ 12/02/2013 17:00. DRILL 12.25" HOLE 44' TO 210' (166' @ 111 FPH). WEIGHT ON BIT 5-15 K. STROKES PER MINUTE=120, GALLONS PER MINUTE=491. PRESSURE ON/OFF (BOTTOM) 800/600. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROTATE 25/25/25 K. DRAG 0 K. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 1 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS.
	18:30 - 20:30	2.00	DRLSUR	06	A	P	230	PRE JOB SAFETY MEETING, CIRC 15 MINUTES AND, TRIP OUT TO CHANGE ASSEMBLY. BREAK 12 1/4" BIT. MAKE UP BAKER HUGHES 11" BIT. PICK UP 8" DIRECTIONAL ASSEMBLY SCIBE MOTOR. INSTALL EM TOOL, TRIP IN HOLE.



US ROCKIES REGION  
Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	20:30 - 0:00	3.50	DRLSUR	02	B	P	230	DRILL 11" SURFACE HOLE FROM 210' TO 600' (390' @ 111 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 800/600. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 55/44/50 K. DRAG 5 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 0.3' LOW / 0.3' LEFT OF THE LINE WITH 40' OF SLIDE @ 7%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
12/3/2013	0:00 - 5:30	5.50	DRLSUR	02	B	P	620	DRILL 11" SURFACE HOLE FROM 600' TO 1060' (460' @ 84 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 900/700. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 55/44/50 K. DRAG 5 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 0.0' LOW / 1.4' RIGHT OF THE LINE WITH 38' OF SLIDE @ 9%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	5:30 - 6:00	0.50	DRLSUR	23		P	1080	CONDUCT PRE TOUR SAFETY MEETING. TOPIC: DRILLING AHEAD.
	6:00 - 17:30	11.50	DRLSUR	02	B	P	1080	DRILL 11" SURFACE HOLE FROM 1060' TO 2200' (1140' @ 99 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1250/71050. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 78/72/75 K. DRAG 3 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3.1' LOW / 3.7' RIGHT OF THE LINE WITH 25' OF SLIDE @ 2%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	17:30 - 18:00	0.50	DRLSUR	23		P	2220	CONDUCT PRE TOUR SAFETY MEETING. TOPIC: DRILLING AHEAD IN SNOWY CONDITIONS.



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:00 - 0:00	6.00	DRLSUR	02	B	P	2220	DRILL 11" SURFACE HOLE FROM 2200' TO 2590' (390' @ 65 FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1400/71200. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 85/75/80 K. DRAG 5 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3.1' LOW / 3.7' RIGHT OF THE LINE WITH 25' OF SLIDE @ 2%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
12/4/2013	0:00 - 5:30	5.50	DRLSUR	02	B	P	2610	DRILL 11" SURFACE HOLE FROM 2590' TO 2950 (340' @ 61' FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1250/71050. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 78/72/75 K. DRAG 3 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3.3' HIGH / 1.2' RIGHT OF THE LINE WITH 28' OF SLIDE @ 9%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.
	5:30 - 6:00	0.50	DRLSUR	23		P	2970	CONDUCT PRE TOUR SAFETY MEETING. TOPIC: TRIPPING OUT HOLE, PINCH POINTS.
	6:00 - 7:30	1.50	DRLSUR	02	B	P	2970	DRILL 11" SURFACE HOLE FROM 2950' TO 3015' ( 65' @ 43' FPH). WEIGHT ON BIT 18-21 K. STROKES PER MINUTE=120. GALLONS PER MINUTE=491. PRESSURE ON/OFF(BOTTOM) 1250/71050. ROTARY RPM 55, MOTOR RPM 83, TOTAL RPM 138. UP/DOWN/ ROT 78/72/75 K. DRAG 3 K. FROM DIRECTIONAL PLAN WE ARE CURRENTLY 3.3' HIGH / 1.2' RIGHT OF THE LINE WITH 28' OF SLIDE @ 9%. CIRCULATE CLOSED LOOP SYSTEM WITH 8.5# WATER. RUNNING VOLUME THROUGH 2 CENTRIFUGE DE WATERING AND, RUNNING VOLUME OVER BOTH SHAKERS. NO HOLE ISSUES.



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:30 - 9:30	2.00	DRLSUR	05	F	P	3035	CIRCULATE AND CONDITION HOLE, VOLUME IS CLEAN COMING OVER SHAKERS, 4-400 BBL UPRIGHT'S FULL AND 2-400 BBL UPRIGHTS EMPTY, 1,000 BBLs OF FRESH WATER ON LOCATION FOR CEMENT JOB.
	9:30 - 16:30	7.00	DRLSUR	06	A	P	3035	PRE JOB SAFETY MEETING, TRIP OUT OF HOLE, LAY DOWN DRILL STRING, BOTTOM HOLE ASSEMBLY, LAY DOWN DIRECTIONAL TOOLS, MOTOR AND, BIT. CLEAR TOOL AREA. SPOT SURFACE CASING FOR 8 5/8" CASING RUN
	16:30 - 20:00	3.50	CSGSUR	12	C	P	3035	RUN 66 JOINTS OF 8-5/8". 28# J-55 LTC CASING. RAN 1 CENTRALIZER ON FIRST THREE JOINTS, AND EVERY OTHER JOINT FOR 2 JOINTS FOR A TOTAL OF 5 CENTRALIZERS. RUN A TOTAL OF 66 JOINTS. RUN CASING TO BOTTOM WITH NO PROBLEMS. SET FLOAT SHOE @ 2983,' KB. SET TOP OF BAFFLE PLATE @ 2937'.



US ROCKIES REGION  
Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	20:00 - 0:00	4.00	CSGSUR	12	E	P	3035	JOB SAFETY MEETING WITH PRO PETRO CEMENTERS. RIG UP CEMENTERS PLACE SPILL PROTECTION, RAN 200' OF 1". PIPE DOWN BACK-SIDE OF CASING. PRESSURE TEST LINES TO 1,500 PSI. PUMP 145 BBLS OF WATER AHEAD CLEARING SHOE. MIX AND PUMP 20 BBLS OF GEL WATER FLUSH AHEAD OF CEMENT. MIX AND PUMP 300 SX OF PREMIUM LEAD CEMENT WITH 16% GEL, 10 LB/SX GILSONITE, 2 LB/SX GR-3, 3% SALT, & 0.25 LB/SX FLOCELE. 152.8 BBLS OF SLURRY MIXED @ 12.0 PPG WITH YIELD OF 2.86 CF/SX. MIX & PUMP 175 SX OF PREMIUM TAIL CEMENT WITH 2% CACL2 & 0.25 LB/SX FLOCELE. 35.8 BBL OF SLURRY MIXED @ 15.8 PPG WITH YIELD OF 1.15 CF/SX. DROP PLUG ON FLY. DISPLACE WITH 183.3 BBLS OF FRESH WATER. FULL RETURNS THROUGH OUT JOB. FINAL LIFT OF 680 PSI AT 3.5 BBL/MINUTE. BUMPED PLUG @ 900 PSI. HELD @ 900 PSI FOR 5 MINUTES WITHOUT BLEED OFF. TESTED FLOAT AND FLOAT HELD.  RELEASE RIG @ 12/04/2013 2400  SHUT DOWN AND WASH UP TOP JOB # 1: PUMP CEMENT DOWN ONE INCH PIPE WITH 150 SX PREMIUM CEMENT WITH 4% CACL2 & .25 LB/SX FLOCELE. 30.7 BBLS OF SLURRY MIXED AT 15.8 PPG WITH YIELD OF 1.15 CF/SX. CEMENT RETURNS TO SURFACE 3 BBLS. RIG DOWN CEMENTERS. (CEMENT JOB FINISHED @ 12/05/2013 01:00)
1/23/2014	20:00 - 22:00	2.00	MIRU3	01	C	P	3035	SKID RIG FROM NBU 921-B1BS TO NBU 921-20B AND RIG UP
	22:00 - 0:00	2.00	PRPSPD	14	A	P	3035	NIPPLE UP BOPE & SWACO MPD EQUIPMENT
1/24/2014	0:00 - 8:00	8.00	PRPSPD	15	A	P	3035	PJSM W/ A-1 TESTER /// TEST CHOKE, TIW DART VALVE, UPPER KELLY VALVE, LOWER KELLY VALVE, PIPE RAMS, BLIND RAMS, HCR VALVE, OUTSIDE CCHOKE VALVE, INSIDE & OUTSIDE MANIFOLD VALVES, & SUPER CHOKE @ 250psi LOW FOR 5 MINUTES, AND @ 5000psi HIGH FOR 10 MINUTES. TEST ANNULAR @ 250psi LOW FOR 5 MINUTES AND @ 2500psi HIGH FOR 10 MINUTES /// TEST CASING @ 1500 PSI FOR 30 MINUTES  IBOP WOULD NOT TEST // HAVE ANOTHER ONE HOT SHOTTED OUT )
	8:00 - 10:00	2.00	PRPSPD	15	A	P	3035	TEST WEATHERFORD ROTATING HEAD ASSEMBLY, ORBIT VALVE, SWACO CHOKE VALVES & LINE TO 1000 PSI FOR 10 MINUTES



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	10:00 - 12:00	2.00	PRPSPD	08	C	Z	3035	REPLACE IBOP ( ISSUES BREAKING IT OUT )
	12:00 - 13:30	1.50	PRPSPD	15	A	P	3035	RETEST IBOP /// ALL TESTS GOOD AFTER REPAIRS /// RIG DOWN TEST TOOLS
	13:30 - 14:00	0.50	PRPSPD	14	B	P	3035	INSTALL WEAR BUSHING
	14:00 - 15:00	1.00	PRPSPD	09	A	P	3035	SLIP & CUT 110' OF DRILLING LINE
	15:00 - 15:30	0.50	PRPSPD	07	A	P	3035	SERVICE RIG & EQUIPMENT
	15:30 - 21:00	5.50	PRPSPD	06	A	P	3035	PICK UP PDC LOGIC PLT BIT , HUNTING .20 RPG/1.5 BEND, MWD, ORIENT MWD, & TRIP IN HOLE WITH D.CS, HWDP & DRILL PIPE TO 2800'
	21:00 - 21:30	0.50	DRLPRV	02	F	P	3035	DRILL CMT & FLOAT EQUIPMENT F/ 2957'-T/ 3004' ///
	21:30 - 0:00	2.50	DRLPRV	02	B	P	3035	CLEAN OUT OPEN HOLE F/ 3004'- T/ 3035' DRILL ( ROTATE/SLIDE) F/ 3035'-T/ 3291' RATE OF PENATRATION= 256' @ 102.4' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR =117 TOP DRIVE= 75 ~ TOTAL= 192 GALLONS PER MINUTE = 585 STROKES PER MINUTE = 130 STAND PIPE PSI-ON/OFF = 1960 / 1600 TORQUE~ ON/OFF = 6000 / 5000 PICKUP/SLACK OFF/ROTATE= 105K / 94K / 100K MUD WEIGHT= 8.7 / VISCOSITY= 34 NOV DEWATERING. SWACO OFF LINE SLIDE= 12' / 10 MINUTES BIT POSITION= 0.83' RIGHT & 0.15' BELOW THE TARGET LINE LAST SURVEY= 0 MUD LOST TO SEEPAGE
1/25/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	3291	DRILL ( ROTATE/SLIDE) F/ 3291' - T/ 4109' RATE OF PENATRATION= 818' @ 136.3' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR =117 TOP DRIVE= 75 ~ TOTAL= 192 GALLONS PER MINUTE = 585 STROKES PER MINUTE = 130 STAND PIPE PSI-ON/OFF = 1960 / 1600 TORQUE~ ON/OFF = 6000 / 5000 PICKUP/SLACK OFF/ROTATE= 115K / 104K / 110K MUD WEIGHT= 8.7 / VISCOSITY= 34 NOV DEWATERING. SWACO OFF LINE SLIDE= 0 BIT POSITION= 6.55' WEST & 18.37' NORTH OF THE TARGET LINE LAST SURVEY @ 3896' = 0.87 DEG., 173.51 AZ., 3893' TVD 0 MUD LOST TO SEEPAGE



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:00 - 12:00	6.00	DRLPRV	02	B	P	4109	DRILL ( ROTATE/SLIDE) F/ 4109' - T/ 4728' RATE OF PENATRATION= 619' @ 103.2' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR =117 TOP DRIVE= 75 ~ TOTAL= 192 GALLONS PER MINUTE = 585 STROKES PER MINUTE = 130 STAND PIPE PSI~ON/OFF = 1960 / 1600 TORQUE~ ON/OFF = 6000 / 5000 PICKUP/SLACK OFF/ROTATE= 122K / 111K / 117K MUD WEIGHT= 8.7 / VISCOSITY= 34 NOV DEWATERING. SWACO OFF LINE SLIDE= 54' / 1 HOUR 25 MINUTES BIT POSITION= 6.17' WEST & 3.71' NORTH OF THE TARGET LINE LAST SURVEY @ 4651' = 0.42 DEG., 189.76 AZ., 4648' TVD 0 MUD LOST TO SEEPAGE
	12:00 - 17:00	5.00	DRLPRV	02	B	P	4728	DRILL ( ROTATE/SLIDE) F/ 4728'- T/ 5082' RATE OF PENATRATION= 354' @ 70.8' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR =117 TOP DRIVE= 75 ~ TOTAL= 192 GALLONS PER MINUTE = 585 STROKES PER MINUTE = 130 STAND PIPE PSI~ON/OFF = 1960 / 1600 TORQUE~ ON/OFF = 7000 / 6000 PICKUP/SLACK OFF/ROTATE= 135K / 120K / 124K MUD WEIGHT= 8.7 / VISCOSITY= 34 NOV DEWATERING. SWACO OFF LINE SLIDE= 48' / 1 HOUR 35 MINUTES BIT POSITION= 0.43' WEST & 4.32' NORTH OF THE TARGET LINE LAST SURVEY @ 5028' = 1.49 DEG., 53.23 AZ., 5025' TVD 50 MUD LOST TO SEEPAGE
	17:00 - 17:30	0.50	DRLPRV	07	A	P	5082	SERVICE RIG & EQUIPMENT



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	17:30 - 0:00	6.50	DRLPRV	02	B	P	5082	DRILL ( ROTATE/SLIDE) F/ 5082' - T/ 5800' RATE OF PENATRATION= 718' @ 110.5' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR =117 TOP DRIVE= 75 ~ TOTAL= 192 GALLONS PER MINUTE = 585 STROKES PER MINUTE = 130 STAND PIPE PSI~ON/OFF = 1960 / 1600 TORQUE~ ON/OFF = 7000 / 6000 PICKUP/SLACK OFF/ROTATE= 145K / 120K / 139K MUD WEIGHT= 8.7 / VISCOSITY= 34 NOV DEWATERING. SWACO OFF LINE SLIDE= 14' / 30 MINUTES BIT POSITION= 4.37' EAST & 15.44' NORTH OF THE TARGET LINE LAST SURVEY @ 5690' = 1.28 DEG., 295.38 AZ., 5686' TVD 60 MUD LOST TO SEEPAGE
1/26/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	5800	DRILL ( ROTATE/SLIDE) F/ 5800' - T/ 6406' RATE OF PENATRATION= 606' @ 101' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR =117 TOP DRIVE= 75 ~ TOTAL= 192 GALLONS PER MINUTE = 585 STROKES PER MINUTE = 130 STAND PIPE PSI~ON/OFF = 2000 / 1750 TORQUE~ ON/OFF = 7000 / 6000 PICKUP/SLACK OFF/ROTATE= 148K / 121K / 141K MUD WEIGHT= 8.8 / VISCOSITY= 32 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. SWACO OFF LINE SLIDE= 10' / 30 MINUTES BIT POSITION= 0.94' WEST & 12.14' NORTH OF THE TARGET LINE LAST SURVEY @ 6162' = 0.65 DEG., 213.95 AZ., 6158' TVD 60 MUD LOST TO SEEPAGE



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:00 - 12:00	6.00	DRLPRV	02	B	P	6406	DRILL ( ROTATE/SLIDE) F/ 6406' - T/ 6792' RATE OF PENATRATION= 386' @ 64.3' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR =117 TOP DRIVE= 75 ~ TOTAL= 192 GALLONS PER MINUTE = 585 STROKES PER MINUTE = 130 STAND PIPE PSI~ON/OFF = 2100 / 1750 TORQUE~ ON/OFF = 7000 / 6000 PICKUP/SLACK OFF/ROTATE= 152K / 124K / 145K MUD WEIGHT= 8.9 / VISCOSITY= 32 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. SWACO OFF LINE SLIDE= 0 BIT POSITION= 9.33' WEST & 9.39' NORTH OF THE TARGET LINE LAST SURVEY @ 6727' = 0.86 DEG., 204.51 AZ., 6723' TVD 30 MUD LOST TO SEEPAGE
	12:00 - 17:30	5.50	DRLPRV	02	B	P	6792	DRILL ( ROTATE/SLIDE) F/ 6792'- T/ 7160' RATE OF PENATRATION= 368' @ 66.9' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR =117 TOP DRIVE= 75 ~ TOTAL= 192 GALLONS PER MINUTE = 585 STROKES PER MINUTE = 130 STAND PIPE PSI~ON/OFF = 2200 / 1975 TORQUE~ ON/OFF = 7000 / 6000 PICKUP/SLACK OFF/ROTATE= 165K / 145K / 154K MUD WEIGHT= 8.7 / VISCOSITY= 34 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. SWACO OFF LINE SLIDE= 0 BIT POSITION= 11.21' WEST & 1.54' NORTH OF THE TARGET LINE LAST SURVEY @ 7104' = 1.67 DEG., 185.94 AZ., 7100' TVD 30 MUD LOST TO SEEPAGE
	17:30 - 18:00	0.50	DRLPRV	07	A	P	7160	SERVICE RIG AND EQUIPMENT



US ROCKIES REGION  
Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:00 - 22:00	4.00	DRLPRV	02	B	P	7160	DRILL ( ROTATE/SLIDE) F/ 7160' -T/ 7306' RATE OF PENATRATION= 146' @ 36.5' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR =117 TOP DRIVE= 75 ~ TOTAL= 192 GALLONS PER MINUTE = 585 STROKES PER MINUTE = 130 STAND PIPE PSI-ON/OFF = 2100 / 1900 TORQUE~ ON/OFF = 7000 / 6000 PICKUP/SLACK OFF/ROTATE= 152K / 124K / 145K MUD WEIGHT= 8.7 / VISCOSITY= 34 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. SWACO ON LINE FULL OPEN  60 MUD LOST TO SEEPAGE  TRIP FOR BIT #1 DUE TO PENETRATION RATE
	22:00 - 22:30	0.50	DRLPRV	05	J	P	7306	CHECK FOR FLOW & PUMP DRY JOB
	22:30 - 0:00	1.50	DRLPRV	06	A	P	7306	TRIP OUT OF HOLE WITH BIT #1
1/27/2014	0:00 - 2:00	2.00	DRLPRV	05	J	X	7306	***CKECK FOE FLOW- WELL FLOWING 5 GALLONS/ MINUTE /// CIRCULATE GAS OUT & SPOT 80 BBL'S 12.2# MUD 500' INTO SURFACE CASING /// CHECK FLOW- WELL STILL FLOWING // CIRCULATE GAS OUT & SPOT 100 BBL'S 12.2# MUD 1500' INT SURFACE CASING // CHECK FLOW - NO FLOW
	2:00 - 7:00	5.00	DRLPRV	06	A	P	7306	TRIP OUT OF HOLE FOR BIT #1
	7:00 - 12:30	5.50	DRLPRV	06	A	P	7306	PICK UP BIT #2 ( SEC MM65M ) NEW MUD MOTOR , SCRIBE MWD & TRIP IN HOLE
	12:30 - 16:00	3.50	DRLPRV	02	B	P	7306	DRILL ( ROTATE/SLIDE) F/ 7306' - T/ 7536' RATE OF PENATRATION= 230' @ 65.7' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR = 99 TOP DRIVE= 75 ~ TOTAL= 174 GALLONS PER MINUTE = 495 STROKES PER MINUTE = 110 STAND PIPE PSI-ON/OFF = 2150 / 1900 TORQUE~ ON/OFF = 9000 / 7000 PICKUP/SLACK OFF/ROTATE= 155K / 125K / 148K MUD WEIGHT= 9.1 / VISCOSITY= 34 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. SWACO ON LINE FULL OPEN 40 MUD LOST TO SEEPAGE
	16:00 - 16:30	0.50	DRLPRV	07	A	P	7536	SERVICE RIG & EQUIPMENT



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	16:30 - 18:00	1.50	DRLPRV	02	B	P	7536	DRILL ( ROTATE/SLIDE) F/ 7536' -T/ 7695' RATE OF PENATRATION= 159' @ 106' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR = 99 TOP DRIVE= 75 ~ TOTAL= 174 GALLONS PER MINUTE = 495 STROKES PER MINUTE = 110 STAND PIPE PSI-ON/OFF = 2150 / 1900 TORQUE~ ON/OFF = 9000 / 7000 PICKUP/SLACK OFF/ROTATE= 157K / 127K / 150K MUD WEIGHT= 9.2 / VISCOSITY= 34 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. SWACO ON LINE FULL OPEN SLIDE= 0 BIT POSITION= 1.11' WEST & 7.57' NORTH OF THE TARGET LINE LAST SURVEY @ 7670' = 1.11 DEG., 40.04 AZ., 7666.06' TVD 25 MUD LOST TO SEEPAGE
	18:00 - 0:00	6.00	DRLPRV	02	B	P	7695	DRILL ( ROTATE/SLIDE) F/ 7695' - T/ 8198' RATE OF PENATRATION= 503' @ 83.8' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR = 108 TOP DRIVE= 75 ~ TOTAL= 183 GALLONS PER MINUTE = 540 STROKES PER MINUTE = 120 STAND PIPE PSI-ON/OFF = 2400 / 1980 TORQUE~ ON/OFF = 9000 / 5000 PICKUP/SLACK OFF/ROTATE= 192K / 158K / 175K MUD WEIGHT= 9 / VISCOSITY= 32 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. SWACO ON LINE FULL OPEN 8-10' CONNECTION FLARE SLIDE= 15 / 55 MINUTES BIT POSITION= 1.0' EAST & 10.78' NORTH OF THE TARGET LINE LAST SURVEY @ 8047' = 0.96 DEG., 66.98 AZ., 8043' TVD 25 MUD LOST TO SEEPAGE



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/28/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	8198	DRILL ( ROTATE/SLIDE) F/ 8198' - T/ 8638' RATE OF PENATRATION= 440' @ 73.3' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR = 108 TOP DRIVE= 75 ~ TOTAL= 183 GALLONS PER MINUTE = 540 STROKES PER MINUTE = 120 STAND PIPE PSI~ON/OFF = 2400 / 1980 TORQUE~ ON/OFF = 9000 / 5000 PICKUP/SLACK OFF/ROTATE= 197K / 160K / 177K MUD WEIGHT= 9 / VISCOSITY= 32 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. SWACO ON LINE FULL OPEN 8-10' CONNECTION FLARE SLIDE=0 BIT POSITION= 0.86' EAST & 13.25' NORTH OF THE TARGET LINE LAST SURVEY @ 8519' = 0.45 DEG., 155.72 AZ., 8514' TVD 0 MUD LOST TO SEEPAGE
	6:00 - 9:00	3.00	DRLPRV	02	B	P	8638	DRILL ( ROTATE/SLIDE) F/ 8638' - T/ 8835' RATE OF PENATRATION= 197' @ 65.7' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR = 108 TOP DRIVE= 75 ~ TOTAL= 183 GALLONS PER MINUTE = 540 STROKES PER MINUTE = 120 STAND PIPE PSI~ON/OFF = 2400 / 1980 TORQUE~ ON/OFF = 9000 / 5000 PICKUP/SLACK OFF/ROTATE= 197K / 160K / 177K MUD WEIGHT= 9 / VISCOSITY= 32 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. SWACO ON LINE / 200 PSI ( 9.4 # EQUIVELENT MUD WT ) 5' DRILLING FLARE & 15' CONNECTION FLARE FLARE
	9:00 - 9:30	0.50	DRLPRV	05	B	X	8835	*** TOOK 25 BBL GAIN @ 8840' /// SWACO RAISE BACK PRESSURE F/ 200 PSI TO 650 PSI // BRING MUD WT TO 9.5 TO HELP CONTROLL PRESSURE'S // GET BACK PRESSURE TO 540 PSI ( 10.7# EQUIVELENT MUD WT ) // CIRCULATE GAS OUT



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	9:30 - 12:00	2.50	DRLPRV	02	B	P	8835	DRILL ( ROTATE/SLIDE) F/ 8835'- T/ 8940' RATE OF PENATRATION= 105' @ 42' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR = 108 TOP DRIVE= 75 ~ TOTAL= 183 GALLONS PER MINUTE = 540 STROKES PER MINUTE = 120 STAND PIPE PSI~ON/OFF = 2400 / 1980 TORQUE~ ON/OFF = 9000 / 5000 PICKUP/SLACK OFF/ROTATE= 197K / 160K / 177K MUD WEIGHT= 9.5 / VISCOSITY= 32 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. SWACO ON LINE / 540 PSI ( 10.7 # EQUIVELENT MUD WT ) 5' DRILLING FLARE & 15' CONNECTION FLARE FLARE SLIDE=15' / 1 HOUR 20 MINUTES BIT POSITION= 1.78' EAST & 11.37' NORTH OF THE TARGET LINE LAST SURVEY @ 8708' = 0.17 DEG., 47.9 AZ., 8704' TVD 0 MUD LOST TO SEEPAGE
	12:00 - 16:30	4.50	DRLPRV	02	B	P	8940	DRILL ( ROTATE/SLIDE) F/ 8940' - T/ 9235' RATE OF PENATRATION= 295' @ 65.6' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR = 108 TOP DRIVE= 75 ~ TOTAL= 183 GALLONS PER MINUTE = 540 STROKES PER MINUTE = 120 STAND PIPE PSI~ON/OFF = 2700 / 2500 TORQUE~ ON/OFF = 9000 / 5000 PICKUP/SLACK OFF/ROTATE= 202K / 162K / 184K MUD WEIGHT= 9.5 / VISCOSITY= 32 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. SWACO ON LINE / 540 PSI ( 10.7 # EQUIVELENT MUD WT ) 5' DRILLING FLARE & 15' CONNECTION FLARE FLARE 0 MUD LOST TO SEEPAGE
	16:30 - 17:00	0.50	DRLPRV	02	B	P	9235	SERVICE RIG & EQUIPMENT



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	17:00 - 18:00	1.00	DRLPRV	02	B	P	9235	DRILL ( ROTATE/SLIDE) F/ 9235' - T/ 9314' RATE OF PENATRATION= 79' @ 79' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR = 108 TOP DRIVE= 75 ~ TOTAL= 183 GALLONS PER MINUTE = 540 STROKES PER MINUTE = 120 STAND PIPE PSI~ON/OFF = 2700 / 2500 TORQUE~ ON/OFF = 9000 / 5000 PICKUP/SLACK OFF/ROTATE= 202K / 162K / 184K MUD WEIGHT= 9.5 / VISCOSITY= 32 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. SWACO ON LINE / 540 PSI ( 10.7 # EQUIVELENT MUD WT ) 5' DRILLING FLARE & 15' CONNECTION FLARE FLARE SLIDE=0 BIT POSITION= 5.19' EAST & 8.46' NORTH OF THE TARGET LINE LAST SURVEY @ 9179' = 1.21 DEG., 164.27 AZ., 9175' TVD 35 MUD LOST TO SEEPAGE  RECIEVED 390 BBL'S 12.4# MUD FROM MUD PLANT // SAVE 2 HOURS RIG TIME
	18:00 - 0:00	6.00	DRLPRV	02	B	P	9314	DRILL ( ROTATE/SLIDE) F/ T/ 9314' - T/ 9518' RATE OF PENATRATION= 204' @ 34' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR = 108 TOP DRIVE= 75 ~ TOTAL= 183 GALLONS PER MINUTE = 540 STROKES PER MINUTE = 120 STAND PIPE PSI~ON/OFF = 2900 / 2600 TORQUE~ ON/OFF = 12000 / 6000 PICKUP/SLACK OFF/ROTATE= 215K / 166K / 188K MUD WEIGHT= 9.5 / VISCOSITY= 32 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. SWACO ON LINE / 460 PSI ( 10.4 # EQUIVELENT MUD WT ) 10' DRILLING FLARE & 20' CONNECTION FLARE FLARE SLIDE= 28' / 2 HOURS 20 MINUTES BIT POSITION= 6.0' EAST & 5.58' NORTH OF THE TARGET LINE LAST SURVEY @ 9368' = 0.17 DEG., 268.14 AZ., 9364' TVD 20 MUD LOST TO SEEPAGE



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/29/2014	0:00 - 6:00	6.00	DRLPRV	02	B	P	9518	DRILL ( ROTATE/SLIDE) F/ 9518' - T/ 9739' RATE OF PENATRATION= 221' @ 36.8' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR = 108 TOP DRIVE= 75 ~ TOTAL= 183 GALLONS PER MINUTE = 540 STROKES PER MINUTE = 120 STAND PIPE PSI~ON/OFF = 2900 / 2600 TORQUE~ ON/OFF = 12000 / 6000 PICKUP/SLACK OFF/ROTATE= 217K / 165K / 191K MUD WEIGHT= 9.5 / VISCOSITY= 32 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. SWACO ON LINE / 460 PSI ( 10.4 # EQUIVELENT MUD WT ) 10' DRILLING FLARE & 20' CONNECTION FLARE FLARE SLIDE= 0 BIT POSITION= 4.85' EAST & 6.65' NORTH OF THE TARGET LINE LAST SURVEY @ 9557' = 0.54 DEG., 314.02 AZ., 9553' TVD 0 MUD LOST TO SEEPAGE
	6:00 - 12:00	6.00	DRLPRV	02	B	P	9739	DRILL ( ROTATE/SLIDE) F/ 9739' - T/ 9940' RATE OF PENATRATION= 201' @ 33.5' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR = 99 TOP DRIVE= 75 ~ TOTAL= 174 GALLONS PER MINUTE = 495 STROKES PER MINUTE = 110 STAND PIPE PSI~ON/OFF = 2900 / 2600 TORQUE~ ON/OFF = 10 / 8 PICKUP/SLACK OFF/ROTATE= 220K / 170K / 199K MUD WEIGHT= 9.5 / VISCOSITY= 32 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. AS NEEDED SWACO ON LINE / 460 PSI ( 10.4 # EQUIVELENT MUD WT ) 10' DRILLING FLARE & 20' CONNECTION FLARE FLARE SLIDE= 0 BIT POSITION= 7.33' EAST & 6.27' NORTH OF THE TARGET LINE LAST SURVEY @ 9839' = 1.23 DEG., 92.72 AZ., 9834.86' TVD 0 MUD LOST TO SEEPAGE



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	12:00 - 13:30	1.50	DRLPRV	02	B	P	9940	DRILL ( ROTATE/SLIDE) F/ 9940' - T/ 9988' RATE OF PENATRATION= 48' @ 32' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR = 99 TOP DRIVE= 75 ~ TOTAL= 174 GALLONS PER MINUTE = 495 STROKES PER MINUTE = 110 STAND PIPE PSI~ON/OFF = 2900 / 2600 TORQUE~ ON/OFF = 10 / 8 PICKUP/SLACK OFF/ROTATE= 220K / 170K / 199K MUD WEIGHT= 9.5 / VISCOSITY= 32 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. AS NEEDED SWACO ON LINE / 460 PSI ( 10.4 # EQUIVELENT MUD WT ) 10' DRILLING FLARE & 20' CONNECTION FLARE FLARE SLIDE= 0 BIT POSITION= 7.33' EAST & 6.27' NORTH OF THE TARGET LINE LAST SURVEY @ 9839' = 1.23 DEG., 92.72 AZ., 9834.86' TVD 0 MUD LOST TO SEEPAGE
	13:30 - 14:00	0.50	DRLPRV	07	A	P	9988	RIG SER
	14:00 - 18:00	4.00	DRLPRV	02	B	P	9988	DRILL ( ROTATE/SLIDE) F/ 9988' - T/ 10085' RATE OF PENATRATION= 97' @ 24.25' /HR WEIGHT ON BIT = 19 / 24 K RPM ~ MUD MOTOR = 81 TOP DRIVE= 75 ~ TOTAL= 156 GALLONS PER MINUTE = 405 STROKES PER MINUTE = 90 STAND PIPE PSI~ON/OFF = 2392 / 2050 TORQUE~ ON/OFF = 10 / 8 PICKUP/SLACK OFF/ROTATE= 220K / 170K / 199K MUD WEIGHT= 9.5 / VISCOSITY= 32 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. OFF LINE SWACO ON LINE / 460 PSI ( 10.4 # EQUIVELENT MUD WT ) OFF LINE 10' DRILLING FLARE & 20' CONNECTION FLARE FLARE SLIDE= 0 BIT POSITION= 9.41' EAST & 6.45' NORTH OF THE TARGET LINE LAST SURVEY @ 9933' = 1.37 DEG., 101.45 AZ., 9928.84' TVD 0 MUD LOST TO SEEPAGE



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:00 - 0:00	6.00	DRLPRV	02	B	P	10,085	DRILL ( ROTATE/SLIDE) F/ 10085' - T/ 10225' RATE OF PENATRATION= 140' @23.3 ' /HR WEIGHT ON BIT = 20 / 24 K RPM ~ MUD MOTOR = 90 TOP DRIVE= 75 ~ TOTAL= 165 GALLONS PER MINUTE = 450 STROKES PER MINUTE = 100 STAND PIPE PSI~ON/OFF = 2500 / 1920 TORQUE~ ON/OFF = 10 / 9 PICKUP/SLACK OFF/ROTATE= 227K / 170K / 199K MUD WEIGHT= 12.5 / VISCOSITY= 38 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. OFF LINE SWACO ON LINE / 460 PSI ( 10.4 # EQUIVELENT MUD WT ) OFF LINE 10' DRILLING FLARE & 20' CONNECTION FLARE FLARE SLIDE= 0 BIT POSITION= 17.27 ' EAST & 2.55' NORTH OF THE TARGET LINE LAST SURVEY @ 10217 ' = 1.26 DEG., 116.65 AZ., 10212.77' TVD 0 MUD LOST TO SEEPAGE
1/30/2014	0:00 - 4:00	4.00	DRLPRV	02	B	P	10,225	DRILL ( ROTATE/SLIDE) F/ 10225' - T/ 10344' RATE OF PENATRATION= 119' @ 29.75 ' /HR WEIGHT ON BIT = 20 / 24 K RPM ~ MUD MOTOR = 90 TOP DRIVE= 75 ~ TOTAL= 165 GALLONS PER MINUTE = 450 STROKES PER MINUTE = 100 STAND PIPE PSI~ON/OFF = 2500 / 1920 TORQUE~ ON/OFF = 10 / 9 PICKUP/SLACK OFF/ROTATE= 227K / 170K / 199K MUD WEIGHT= 12.5 / VISCOSITY= 38 PUMPING LCM SWEEPS TO CONTROL LOSSES NOV DEWATERING. OFF LINE SWACO ON LINE / 460 PSI ( 10.4 # EQUIVELENT MUD WT ) OFF LINE 10' DRILLING FLARE & 20' CONNECTION FLARE FLARE SLIDE= 0 BIT POSITION= 17.27 ' EAST & 2.55' NORTH OF THE TARGET LINE LAST SURVEY @ 10344 ' = 1.06 DEG., 127.37 AZ., 10339.75' TVD 0 MUD LOST TO SEEPAGE
	4:00 - 5:30	1.50	DRLPRV	05	A	P	10,344	CIR C MUD FOR LOGS
	5:30 - 10:30	5.00	DRLPRV	06	A	P	10,344	TRIP OUT HOLE FOR LOGS
	10:30 - 11:30	1.00	DRLPRV	06	A	P	10,344	LAY DOWN MUD MOTOR , BIT MWD TOOLS



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: PROPETRO 12/12, H&amp;P 318/318

Event: DRILLING

Start Date: 12/2/2013

End Date:

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	11:30 - 17:00	5.50	DRLPRV	06	A	P	10,344	HELD SAFETY MEETING W/ WEATHERFORD LOGGING CREW, PICKED UP 7 5/8 BIT , CROSS OVER SUB , FLOAT SUB, 4 JOINTS 3.5 DRILL PIPE WITH TOOLS JOINT OD 4.75, 4 13/16, 4.75, 4.78/ UPPER LATCH SUB, LOWER LATCH SUB / PICK UP LOGGING TOOLS / WITH SOURCE PUMPED THROUGH LOGGING BTOOLS PRESURE WOULD NOT STABILIZE ,
	17:00 - 23:30	6.50	DRLPRV	11	D	P	10,344	TRIP IN TO SHOE PUMPED THROUGH TOOLS STABILIZE TRIP IN HOLE FILL ING PIPE EVERY 20 STANDS
	23:30 - 0:00	0.50	DRLPRV	11	D	P	10,344	PUMP LOG TOOLS OUT BOTTOM 3.5 DRILL PIPE TAGED UP @ 10 322' 22' OFF BOTTOM
1/31/2014	0:00 - 0:30	0.50	EVALPR	11	D	P	10,344	DROP DART PUMP DOWN TO DEPLOY LOGGING TOOL
	0:30 - 12:30	12.00	EVALPR	11	D	P	10,344	TRIP OUT HOLE LOGGING / LAY DOWN BHA/ LAY DOWN LOG TOOLS/ LOGGER TD 10,325 DRILLER TD 10,344
	12:30 - 13:00	0.50	CSGPRO	12	A	P	10,344	PULL WEAR BUSHING
	13:00 - 14:00	1.00	CSGPRO	12	A	P	10,344	PJSM / WITH KIMZEY CASING , RIG UP TO RUN 4.5 CASING CHANGED OUT ELEV. / RIG UP TONGS
	14:00 - 21:30	7.50	CSGPRO	12	C	P	10,344	RUN 4.5 CASING SHOE @ 10, 318 F/F @ 10,272, MESAVERDE MARKER @ 8,051/ D V TOOL @ 5,277 / CROSS OVER JTS. @ 4963 RUN 120 JTS LT&C 11.6 P110 / 112 JTS DQX 11.6 I-80
	21:30 - 22:00	0.50	CSGPRO	12	A	P	10,344	CIRC 4.5 CASING / RIG DOWN CASING CREWS
	22:00 - 23:30	1.50	CSGPRO	05	A	P	10,344	CIRC 4.5 CASING
	23:30 - 0:00	0.50	CSGPRO	12	D	P	10,344	PRESURE TEST LINES TO 6,000 PSI
2/1/2014	0:00 - 2:30	2.50	CSGPRO	12	E	P	10,344	FIRST STAGE 14.3 YIELD 1.35 1125 SX CMT 50:50 POZ CLASS G CEMENT 0.05%BWOC STATIC FREE+10%BWOW SODIUM CHLORIDE +0.55%BWOC R-3+0.5%BWOC EC-1+0.25 LBS/SACK CELLO FLAKE+0.002 GPS FP-6L+0.7%BWOC SODIUM METASILICATE +2%BWOC BENTONITE II+5 LBS/SACK KOL-SEAL LIFT PRESURE 2210 CAL. LIFT WAS 1900 PSI BUMP PRESURE 2820 FLOATS HELD RETRUNED 25 BARRLES WATER NO CMT
	2:30 - 5:30	3.00	CSGPRO	05	A	P	10,344	CIRC BETWEEN STAGES HAD 25 BARRLES WATER TO PIT NO CMT LOST RETUNES AFTER BOTTOMS LOST 200 BBLS 12.5 MUD PUMPED 15% LCM SWEEP DOWN HOLE REGAINED CIRC 100 %
	5:30 - 8:30	3.00	CSGPRO	12	E	P	10,344	CMT SEC. STAGE LEAD CEMENT 13.0 YIELD 1.78 825 SACKS CEMENT PREMIUM LITEII CEMENT +0.05% BWOC STATIC FREE +1 %BWOC CALCIUM CHLORIDE +0.25 LBS/SACK CELLO FLAKE +5 LBS/SACK KOL-SEAL 50LB BAG+45 BWOC FL-52 +0.3%BWOC SODIUM METASILICATE +6% BWOC BENTONITE II TAIL CEMENT 15.8 YIELD 1.16 60 SACKS CEMENT CLASS G CEMENT +1 % BWOC CALCIUM CHLORIDE +0.4% BWOC SODIUM METASILICATE DISPLACE WITH CALY FIX WATER 82.2 BARRLES LIFT PRESURE 1500 BUMP PRESURE 3250 FLOATS HELD HAD 15 BARRLES CEMENT TO SURFACE



US ROCKIES REGION  
**Operation Summary Report**

Well: NBU 921-20B GREEN					Spud Date: 12/2/2013					
Project: UTAH-UINTAH				Site: NBU 921-20B PAD				Rig Name No: PROPETRO 12/12, H&P 318/318		
Event: DRILLING				Start Date: 12/2/2013				End Date:		
Active Datum: RKB @4,897.00usft (above Mean Sea Level)				UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0						
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
	8:30 - 9:30	1.00	CSGPRO	12	B	P	10,344	BACK FLUSH BOPS, FLOW LINES , RIG DOWN CEMENT EQUIPMENT		
	9:30 - 10:30	1.00	CSGPRO	12	B	P	10,344	SET PACK OFF ,NIPPLE DOWN BOPS RIG RELEASED @ 10:30 2/1/2014		



US ROCKIES REGION

1 General

1.1 Customer Information

Company	US ROCKIES REGION		
Representative			
Address			

1.2 Well/Wellbore Information

Well	NBU 921-20B GREEN	Wellbore No.	OH
Well Name	NBU 921-20B	Wellbore Name	NBU 921-20B
Report No.	1	Report Date	4/28/2014
Project	UTAH-UINTAH	Site	NBU 921-20B PAD
Rig Name/No.	MILES 3/3	Event	COMPLETION
Start Date	3/24/2014	End Date	5/19/2014
Spud Date	12/2/2013	Active Datum	RKB @4,897.00usft (above Mean Sea Level)
UWI	NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0		

1.3 General

Contractor		Job Method		Supervisor	
Perforated Assembly		Conveyed Method			

1.4 Initial Conditions

Fluid Type	Fluid Density				
Surface Press	Estimate Res Press	Gross Interval	8,115.0 (usft)	Start Date/Time	4/28/2014 12:00AM
TVD Fluid Top	Fluid Head	No. of Intervals	52	End Date/Time	4/28/2014 12:00AM
Hydrostatic Press	Press Difference	Total Shots	192	Net Perforation Interval	64.00 (usft)
Balance Cond	NEUTRAL	Avg Shot Density	3.00 (shot/ft)	Final Surface Pressure	
				Final Press Date	

1.5 Summary

2 Intervals

2.1 Perforated Interval

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/28/2014 12:00AM	MESAVERDE/			8,115.0	8,116.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N



## US ROCKIES REGION

## 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/28/2014 12:00AM	MESAVERDE/			8,119.0	8,120.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,130.0	8,131.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,135.0	8,136.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,140.0	8,141.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,324.0	8,325.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,367.0	8,369.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,472.0	8,473.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,502.0	8,503.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,545.0	8,546.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,623.0	8,624.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,632.0	8,633.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,652.0	8,653.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,683.0	8,684.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,695.0	8,696.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,774.0	8,775.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,796.0	8,798.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,853.0	8,854.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,878.0	8,879.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,894.0	8,896.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			8,907.0	8,908.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N
4/28/2014 12:00AM	MESAVERDE/			9,095.0	9,097.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	N

RECEIVED: Jun. 06, 2014



## US ROCKIES REGION

## 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/28/2014 12:00AM	MESAVERDE/			9,111.0	9,113.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,129.0	9,131.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,139.0	9,141.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,240.0	9,241.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,315.0	9,317.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,357.0	9,358.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,365.0	9,367.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,374.0	9,376.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,520.0	9,521.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,551.0	9,552.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,580.0	9,581.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,589.0	9,590.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,597.0	9,598.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,620.0	9,621.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,629.0	9,630.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,675.0	9,676.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,713.0	9,714.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,733.0	9,734.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,744.0	9,745.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,755.0	9,756.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	
4/28/2014 12:00AM	MESAVERDE/			9,773.0	9,774.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO N	

RECEIVED: Jun. 06, 2014



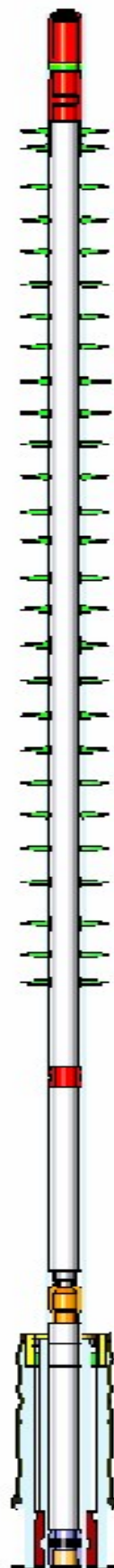
## US ROCKIES REGION

## 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/28/2014 12:00AM	MESAVERDE/			9,787.0	9,788.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	
4/28/2014 12:00AM	MESAVERDE/			9,890.0	9,891.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	
4/28/2014 12:00AM	MESAVERDE/			9,920.0	9,921.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	
4/28/2014 12:00AM	MESAVERDE/			9,954.0	9,955.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	
4/28/2014 12:00AM	MESAVERDE/			9,976.0	9,977.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	
4/28/2014 12:00AM	MESAVERDE/			10,126.0	10,127.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	
4/28/2014 12:00AM	MESAVERDE/			10,163.0	10,164.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	
4/28/2014 12:00AM	MESAVERDE/			10,202.0	10,204.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	
4/28/2014 12:00AM	MESAVERDE/			10,225.0	10,227.0	3.00		0.410	EXP/	3.125	120.00		19.00	PRODUCTIO	

## 3 Plots

## 3.1 Wellbore Schematic



RECEIVED: Jun. 06, 2014



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: MILES 3/3, MILES 4/4

Event: COMPLETION

Start Date: 3/24/2014

End Date: 5/19/2014

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
3/24/2014	13:30 - 15:00	1.50	SUBSPR	30	A	P		4 OF 7, MOVED OVER & RIGGED UP, ND WH NU BOPS RU FLOOR.
	15:00 - 17:00	2.00	SUBSPR	31	I	P		PU 37/8 BIT & 145 JTS 23/8 P-110 EOT @ 4610 ' SWI SDFN.
3/25/2014	7:00 - 7:30	0.50	SUBSPR	48		P		HSM. WORKING W/ POWER SWIVEL.
	7:30 - 8:00	0.50	SUBSPR	31	I	P		PU REM 18 JTS 163 IN TAG CMT @ 5166' RU DRLG EQUIP.
	8:00 - 13:00	5.00	SUBSPR	44	D	P		4 OF 7, BROKE CIRC REV, D/O 117' CMT & DV @ 5283' S.L.M.' CIRC CLN, TEST CSG TO 3,000# RD SWIVEL. PU TBG 156 JTS TOTAL 323 JTS IN TAG UP @ 10,239' D/O WIPER PLUG & CMT TO 10,271 S.L.M. DISPLACE CMT WTR TO PIT W/ 146 BBLS T-MAC, RD SWIVEL.
	13:00 - 17:00	4.00	SUBSPR	31	I	P		L/D 324 JTS 23/8 P-110 & BIT SWI SDFN.
4/3/2014	-							
4/15/2014	11:00 - 12:00	1.00	SUBSPR	52	B	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST -52 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. FILL SURFACE CSG. MIRU CAMERON QUICK TEST.
								PRESSURE TEST 8 5/8 X 4 1/2 TO 548 PSI HELD FOR 5 MIN LOST -321 PSI, BLEED PSI OFF, REINSTALLED POP OFF SWIFN NO PRESSURE ON SURFACE CASING FILLED SURFACE WITH 1 BBL H2O
4/25/2014	8:00 - 9:00	1.00	SUBSPR	37		P		PERF STG 1) PU 3 1/8 EXP GUN, 19 GM, .40 HOLE SIZE. RIH PERFWELL, AS PER PERF DESIGN. POOH. SWIFW
4/28/2014	6:30 - 6:45	0.25	FRAC	48		P		HSM-JSA
	6:45 - 18:00	11.25	FRAC	36	H	P		FRAC STG #1) WHP 1825 PSI, BRK 4248 PSI @ 5.6 BPM. ISIP 3235 PSI, FG. 0.76 ISIP 3131 PSI, FG. 0.75, NPI -104 PSI, SWI, SDFN.
4/29/2014	6:15 - 6:30	0.25	FRAC	48		P		HSM-JSA



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: MILES 3/3, MILES 4/4

Event: COMPLETION

Start Date: 3/24/2014

End Date: 5/19/2014

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:30 - 17:30	11.00	FRAC	36	H	P		SET CBP & PERF STG #2 AS DESIGNED, X/O TO FRAC.  FRAC STG #2) WHP 1563 PSI, BRK 4111 PSI @ 4 BPM. ISIP 3272 PSI, FG. 0.77 ISIP 3399 PSI, FG. 0.78, NPI 127 PSI, X/O TO WL.  SET CBP & PERF STG #3 AS DESIGNED, X/O TO FRAC.  FRAC STG #3) WHP 2479 PSI, BRK 4622 PSI @ 4.1 BPM. ISIP 3272 PSI, FG. 0.78 ISIP 3280 PSI, FG. 0.78, NPI 8 PSI, X/O TO WL.  SET CBP & PERF STG #4 AS DESIGNED, SWI, SDFN. HSM-JSA
4/30/2014	6:30 - 6:45	0.25	FRAC	48		P		
	6:45 - 17:00	10.25	FRAC	36	H	P		FRAC STG #4) WHP 2552 PSI, BRK 5043 PSI @ 4.1 BPM. ISIP 3213 PSI, FG. 0.78 ISIP 2938 PSI, FG. 0.75, NPI -275 PSI, X/O TO WL.  SET CBP & PERF STG #5 AS DESIGNED, SWI, SDFN. HSM-JSA
5/5/2014	6:30 - 6:45	0.25	FRAC	48		P		
	6:45 - 18:00	11.25	FRAC	36	H	P		FRAC STG #5) WHP 1651 PSI, BRK 4502 PSI @ 6.8 BPM. ISIP 2812 PSI, FG. 0.75 ISIP 3204 PSI, FG. 0.79, NPI 392 PSI, X/O TO WL.  SET CBP & PERF STG #6 AS DESIGNED, X/O TO FRAC.  FRAC STG #6) WHP 1790 PSI, BRK 2821 PSI @ 5.6 BPM. ISIP 2446 PSI, FG. 0.72 ISIP 3015 PSI, FG. 0.78, NPI 569 PSI, X/O TO WL.  SET CBP & PERF STG #7 AS DESIGNED, SWI, SDFN. HSM-JSA
5/6/2014	6:15 - 6:30	0.25	FRAC	48		P		
	6:30 - 17:30	11.00	FRAC	36	H	P		FRAC STG #7) WHP 1725 PSI, BRK 2542 PSI @ 7 BPM. ISIP 2091 PSI, FG. 0.68 ISIP 2665 PSI, FG. 0.75, NPI 574 PSI, X/O TO WL.  SET CBP & PERF STG #8 AS DESIGNED, X/O TO FRAC.  FRAC STG #8) WHP 2090 PSI, BRK 2360 PSI @ 4.6 BPM. ISIP 2124 PSI, FG. 0.7 ISIP 2777 PSI, FG. 0.78, NPI 653 PSI, X/O TO WL.  SET KILL PLUG, RDMO WL & FRAC EQUIP.  TOTAL FLUID= 9391 BBLS TOTAL SAND= 185691 LBS
5/8/2014	6:30 - 6:45	0.25	SURFPR	48		P		HSM,JSA
	6:45 - 15:30	8.75	SURFPR	34	I	P		MIRU CUTTERS SET 8K TOP KILL PLUG @ 7811' DID NOT HOLD SET 8K PLUG @ 5234' BLEED OFF SWI W/O DRILL OUT
5/16/2014	7:00 - 7:15	0.25	DRLOUT	48		P		HSM, SLIPS, TRIPS & FALLS, PU TBG, PT BOP



US ROCKIES REGION  
**Operation Summary Report**

Well: NBU 921-20B GREEN				Spud Date: 12/2/2013					
Project: UTAH-UINTAH			Site: NBU 921-20B PAD				Rig Name No: MILES 3/3, MILES 4/4		
Event: COMPLETION			Start Date: 3/24/2014				End Date: 5/19/2014		
Active Datum: RKB @4,897.00usft (above Mean Sea Level)				UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation	
	7:15 - 17:00	9.75	DRLOUT	31	I	P		4 OF 7, MIRU, ND WH, NU BOP, RU FLOOR & TBG EQUIP, SPOT TBG TRAILER, PU 3 7/8" BIT, POBS, 1.875" XN S/N, TALLY & PU TBG TO KILL PLUG @ 5234', STD BACK 40 STDS, PU 80 JTS, RU P/S, INSTAL W/R FILL TBG & BREAK CIRC, P/T BOP TO 3000 PSI GOOD, SWI, SDFWE, D/O CBP'S ON MONDAY	
5/19/2014	7:00 - 7:15	0.25	DRLOUT	48		P		HSM, SLIPS, TRIPS & FALLS, D/O CBP'S, LANDING TBG, PUMPING BIT OFF, PT LINES	



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: MILES 3/3, MILES 4/4

Event: COMPLETION

Start Date: 3/24/2014

End Date: 5/19/2014

Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 16:00	8.75	DRLOUT	44	C	P		4 OF 7, SURFACE CSG VALVE OPEN & LOCKED, D/O 10 CBP'S THRU BJD & HAL 9000
								C/O 20' SAND, TAG 1ST (KILL) PLUG @ 5234', KICK 200 PSI, CSG PRESS 0 PSI, RIH
								C/O 0' SAND, TAG 2ND (KILL) PLUG @ 7811', KICK 0 PSI, CSG PRESS 0 PSI, RIH
								C/O 45' SAND, TAG 3RD PLUG @ 8065', KICK 500 PSI, CSG PRESS 0 PSI, RIH
								C/O 60' SAND, TAG 4TH PLUG @ 8399', KICK 900 PSI, CSG PRESS 300 PSI, RIH
								C/O 30' SAND, TAG 5TH PLUG @ 8726', KICK 700 PSI, CSG PRESS 300 PSI, RIH
								C/O 40' SAND, TAG 6TH PLUG @ 8938', KICK 600 PSI, CSG PRESS 300 PSI, RIH
								C/O 30' SAND, TAG 7TH PLUG @ 9171', KICK 1000 PSI, CSG PRESS 200 PSI, RIH
								C/O 15' SAND, TAG 8TH PLUG @ 9406', KICK 600 PSI, CSG PRESS 300 PSI, RIH
								C/O 25' SAND, TAG 9TH PLUG @ 9691', KICK 700 PSI, CSG PRESS 450 PSI, RIH
								C/O 15' SAND, TAG 10TH PLUG @ 9936', KICK 600 PSI, CSG PRESS 500 PSI,
								PBTD @ 10271', BTM PERF @ 10227', RIH TAGGED @ 10225', C/O TO 10271' PBTD, 44' PAST BTM PERF W/ 324 JTS 2 3/8" J-55 & L-80 TBG, LD 19 JTS, PU & STRIP IN TBG HANGER & LAND TBG W/ 305 JTS 2 3/8" TBG, EOT 9673.43'.
								NOTE: D/O THRU BJD & (2) HAL 9000, SOLD THRU 2 SEPERATORS NBU 921-20B SOLD 223 MCF NBU 921-20C1BS SOLD 293 MCF, TOTAL GAS SOLD 516 MCF.
								RD P/S, FLOOR & TBG EQUIP, ND BOPS, NU WH, DROP BALL & SHEAR OFF BIT, P/T LINE FROM WH TO HAL 9000 TO 3,000 PSI, NO VISIBLE LEAKS.
								TURN OVER TO FLOW BACK CREW & SALES, RD TO MOVE TO NEXT WELL ON PAD.
								KB= 24'
								4 1/16" CAMERON HANGER= .83' TBG
								DELIVERED 165 JTS L-80
								155 JTS 2 3/8" L-80= 4915.65' TBG



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-20B GREEN

Spud Date: 12/2/2013

Project: UTAH-UINTAH

Site: NBU 921-20B PAD

Rig Name No: MILES 3/3, MILES 4/4

Event: COMPLETION

Start Date: 3/24/2014

End Date: 5/19/2014

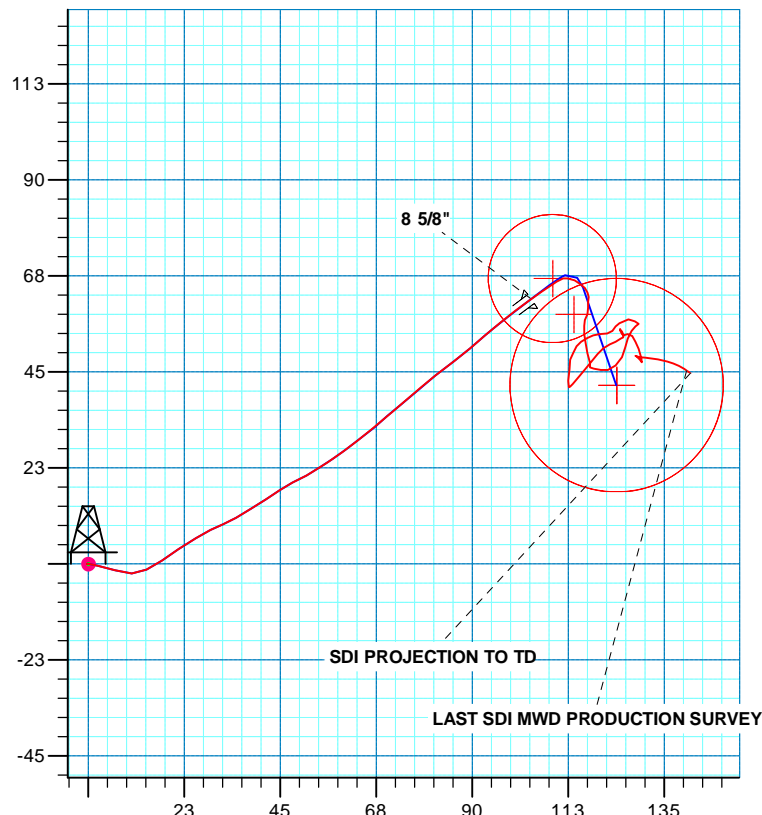
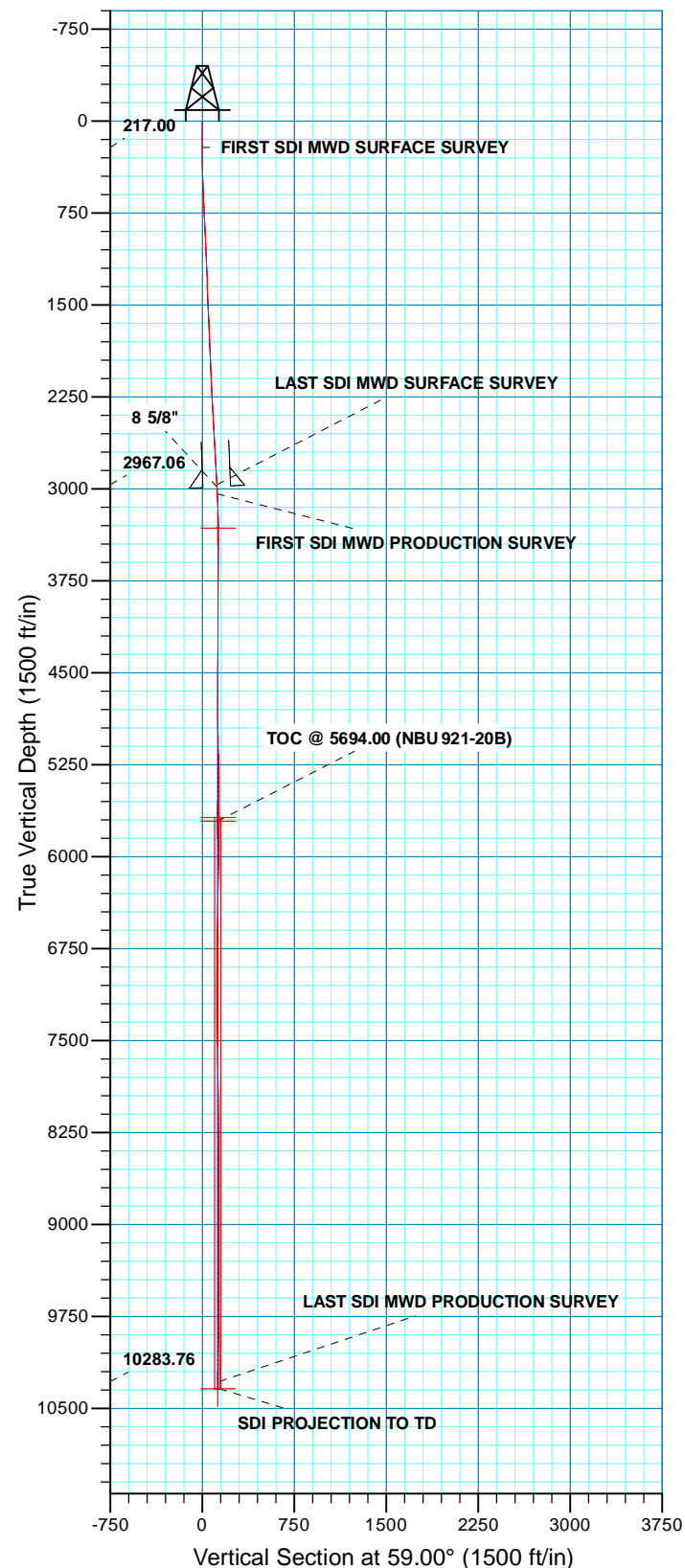
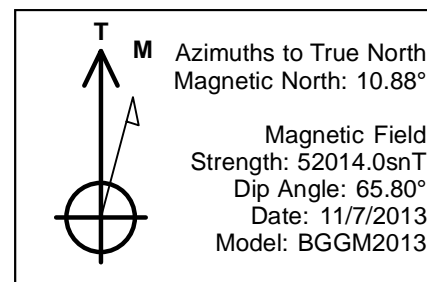
Active Datum: RKB @4,897.00usft (above Mean Sea Level)

UWI: NW/NE/0/9/S/21/E/20/0/0/26/PM/N/758/E/0/2246/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
								DELIVERED 150 JTS J-55 1 - 6' PUP JT L-80= 6.10' TOTAL TBG= 315 JTS L-80 & J-55 150 JTS 2 3/8" J-55 = 4,724.65' TBG USED 305 JTS POBS= 2.20' TBG RETURNED 10 JTS L-80 EOT @ 9673.43'  TWTR= 9391 BBLS TWR= 2500 BBLS TWLTR= 6891 BBLS  NOTE: DV TOOL LEAKING
	16:00 - 16:00	0.00	DRLOUT	50				WELL TURNED TO SALES @ 9:30 HR ON 5/19/2014. 2.5 MCFD, 1560 BWPD, FCP 2300#, FTP 1700#, 20/64" CK.



WELL DETAILS: NBU 921-20B					
GL 4873 & KB 24 @ 4897.00ft (HP 318)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14538997.61	2039771.73	40.0267910	-109.5734970



PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N
Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 20 T9S R21E
System Datum: Mean Sea Level





## **US ROCKIES REGION PLANNING**

**UTAH - UTM (feet), NAD27, Zone 12N**

**NBU 921-20B PAD**

**NBU 921-20B**

**OH**

**Design: OH**

## **Standard Survey Report**

**21 April, 2014**







## Survey Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 921-20B
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 4873 & KB 24 @ 4897.00ft (HP 318)
<b>Site:</b>	NBU 921-20B PAD	<b>MD Reference:</b>	GL 4873 & KB 24 @ 4897.00ft (HP 318)
<b>Well:</b>	NBU 921-20B	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales

<b>Project</b>	UTAH - UTM (feet), NAD27, Zone 12N		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

Site		NBU 921-20B PAD, SECTION 20 T9S R21E			
Site Position:		Northing:	14,539,017.64 usft	Latitude:	40.0268450
From:	Lat/Long	Easting:	2,039,794.09 usft	Longitude:	-109.5734160
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.92 °

Well	NBU 921-20B, 758 FNL 2246 FEL					
Well Position	+N/-S	0.00 ft	Northing:	14,538,997.62 usft	Latitude:	40.0267910
	+E/-W	0.00 ft	Easting:	2,039,771.73 usft	Longitude:	-109.5734970
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,873.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2013	11/7/2013	10.89	65.80	52,014

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	59.00	

<b>Survey Program</b>	<b>Date</b>	4/21/2014			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
20.00	2,970.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
3,046.00	10,344.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
20.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	
217.00	0.18	281.67	217.00	0.06	-0.30	-0.23	0.09	0.09	0.00	
<b>FIRST SDI MWD SURFACE SURVEY</b>										
299.00	0.79	100.80	299.00	-0.02	0.13	0.10	1.18	0.74	218.45	
380.00	2.20	100.18	379.97	-0.40	2.20	1.69	1.74	1.74	-0.77	
473.00	2.90	107.04	472.88	-1.40	6.21	4.60	0.82	0.75	7.38	
563.00	2.29	93.41	562.78	-2.18	10.18	7.61	0.96	-0.68	-15.14	
653.00	2.46	60.89	652.71	-1.34	13.67	11.02	1.49	0.19	-36.13	
743.00	2.90	57.11	742.61	0.83	17.26	15.23	0.53	0.49	-4.20	





## Survey Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 921-20B
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 4873 & KB 24 @ 4897.00ft (HP 318)
<b>Site:</b>	NBU 921-20B PAD	<b>MD Reference:</b>	GL 4873 & KB 24 @ 4897.00ft (HP 318)
<b>Well:</b>	NBU 921-20B	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
833.00	3.08	54.74	832.49	3.47	21.15	19.91	0.24	0.20	-2.63
923.00	2.90	60.01	922.37	6.00	25.10	24.60	0.36	-0.20	5.86
1,013.00	2.20	61.24	1,012.28	7.97	28.58	28.60	0.78	-0.78	1.37
1,103.00	2.02	70.30	1,102.22	9.33	31.59	31.89	0.42	-0.20	10.07
1,193.00	2.37	58.61	1,192.15	10.84	34.67	35.30	0.63	0.39	-12.99
1,283.00	2.73	59.40	1,282.06	12.90	38.11	39.31	0.40	0.40	0.88
1,373.00	2.55	56.15	1,371.97	15.10	41.61	43.45	0.26	-0.20	-3.61
1,463.00	2.29	55.44	1,461.89	17.24	44.76	47.24	0.29	-0.29	-0.79
1,553.00	2.29	64.50	1,551.81	19.03	47.86	50.83	0.40	0.00	10.07
1,643.00	2.37	60.37	1,641.74	20.73	51.10	54.48	0.21	0.09	-4.59
1,733.00	2.29	57.11	1,731.67	22.62	54.23	58.14	0.17	-0.09	-3.62
1,822.00	2.29	57.29	1,820.59	24.55	57.22	61.69	0.01	0.00	0.20
1,912.00	2.64	52.06	1,910.51	26.80	60.37	65.55	0.46	0.39	-5.81
2,002.00	2.73	52.89	2,000.41	29.36	63.71	69.73	0.11	0.10	0.92
2,092.00	2.58	48.18	2,090.32	32.01	66.93	73.85	0.29	-0.17	-5.23
2,182.00	2.64	50.70	2,180.22	34.67	70.04	77.90	0.14	0.07	2.80
2,272.00	2.99	50.35	2,270.11	37.48	73.45	82.27	0.39	0.39	-0.39
2,362.00	3.25	48.59	2,359.98	40.67	77.17	87.10	0.31	0.29	-1.96
2,452.00	3.61	51.40	2,449.82	44.12	81.30	92.41	0.44	0.40	3.12
2,542.00	3.43	53.77	2,539.65	47.48	85.69	97.90	0.26	-0.20	2.63
2,632.00	2.81	49.38	2,629.52	50.51	89.53	102.76	0.74	-0.69	-4.88
2,722.00	3.09	47.74	2,719.40	53.58	93.00	107.31	0.32	0.31	-1.82
2,812.00	2.73	53.60	2,809.28	56.48	96.52	111.83	0.52	-0.40	6.51
2,902.00	3.25	50.52	2,899.16	59.37	100.22	116.48	0.60	0.58	-3.42
2,970.00	2.73	53.69	2,967.06	61.56	103.01	120.00	0.80	-0.76	4.66
LAST SDI MWD SURFACE SURVEY									
3,046.00	3.05	55.43	3,042.97	63.78	106.13	123.82	0.44	0.42	2.29
FIRST SDI MWD PRODUCTION SURVEY									
3,141.00	2.29	59.02	3,137.86	66.19	109.84	128.24	0.82	-0.80	3.78
3,235.00	1.01	104.26	3,231.83	66.95	112.26	130.70	1.84	-1.36	48.13
3,330.00	1.08	106.61	3,326.81	66.49	113.93	131.90	0.09	0.07	2.47
3,424.00	1.04	134.55	3,420.79	65.64	115.38	132.71	0.55	-0.04	29.72
3,519.00	0.64	145.35	3,515.78	64.60	116.30	132.96	0.45	-0.42	11.37
3,613.00	0.77	144.81	3,609.78	63.65	116.96	133.04	0.14	0.14	-0.57
3,707.00	0.74	190.99	3,703.77	62.54	117.21	132.68	0.63	-0.03	49.13
3,802.00	0.75	179.60	3,798.76	61.31	117.10	131.95	0.16	0.01	-11.99
3,896.00	0.87	173.51	3,892.75	59.99	117.18	131.34	0.16	0.13	-6.48
3,991.00	1.00	203.40	3,987.74	58.51	116.93	130.37	0.52	0.14	31.46
4,085.00	0.71	201.32	4,081.73	57.21	116.40	129.24	0.31	-0.31	-2.21
4,179.00	1.05	176.90	4,175.72	55.81	116.23	128.38	0.53	0.36	-25.98
4,273.00	1.36	180.30	4,269.70	53.84	116.27	127.39	0.34	0.33	3.62
4,368.00	0.99	167.08	4,364.68	51.91	116.45	126.55	0.48	-0.39	-13.92
4,462.00	2.09	165.98	4,458.64	49.45	117.05	125.80	1.17	1.17	-1.17





## Survey Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 921-20B
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 4873 & KB 24 @ 4897.00ft (HP 318)
<b>Site:</b>	NBU 921-20B PAD	<b>MD Reference:</b>	GL 4873 & KB 24 @ 4897.00ft (HP 318)
<b>Well:</b>	NBU 921-20B	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,557.00	0.83	172.65	4,553.61	47.09	117.55	125.02	1.34	-1.33	7.02
4,651.00	0.42	189.76	4,647.60	46.08	117.58	124.52	0.47	-0.44	18.20
4,745.00	1.17	90.55	4,741.60	45.73	118.48	125.11	1.39	0.80	-105.54
4,840.00	0.92	110.05	4,836.58	45.46	120.17	126.42	0.45	-0.26	20.53
4,934.00	1.07	70.09	4,930.57	45.50	121.70	127.75	0.74	0.16	-42.51
5,028.00	1.49	53.23	5,024.55	46.53	123.51	129.83	0.60	0.45	-17.94
5,123.00	1.64	23.66	5,119.51	48.51	125.04	132.17	0.85	0.16	-31.13
5,218.00	1.28	11.55	5,214.48	50.80	125.80	134.00	0.50	-0.38	-12.75
5,312.00	1.35	25.92	5,308.46	52.82	126.50	135.63	0.36	0.07	15.29
5,407.00	0.97	25.52	5,403.44	54.55	127.33	137.24	0.40	-0.40	-0.42
5,501.00	0.85	53.50	5,497.43	55.69	128.24	138.60	0.48	-0.13	29.77
5,595.00	0.26	38.29	5,591.42	56.27	128.93	139.49	0.64	-0.63	-16.18
5,690.00	1.28	295.38	5,686.41	56.89	128.10	139.11	1.43	1.07	-108.33
5,784.00	0.75	262.59	5,780.40	57.26	126.54	137.96	0.81	-0.56	-34.88
5,879.00	0.69	235.29	5,875.39	56.86	125.46	136.82	0.36	-0.06	-28.74
5,973.00	0.62	249.78	5,969.38	56.36	124.51	135.76	0.19	-0.07	15.41
6,067.00	0.92	219.46	6,063.38	55.60	123.56	134.55	0.53	0.32	-32.26
6,162.00	0.65	213.95	6,158.37	54.57	122.77	133.34	0.29	-0.28	-5.80
6,255.00	1.03	265.11	6,251.36	54.06	121.64	132.11	0.86	0.41	55.01
6,349.00	1.19	265.07	6,345.34	53.90	119.83	130.48	0.17	0.17	-0.04
6,443.00	0.71	243.58	6,439.33	53.56	118.34	129.02	0.63	-0.51	-22.86
6,538.00	1.11	245.39	6,534.32	52.91	116.97	127.52	0.42	0.42	1.91
6,632.00	1.00	239.13	6,628.30	52.11	115.44	125.79	0.17	-0.12	-6.66
6,727.00	0.86	204.51	6,723.29	51.04	114.43	124.38	0.60	-0.15	-36.44
6,821.00	1.19	211.69	6,817.27	49.57	113.63	122.93	0.38	0.35	7.64
6,915.00	1.14	189.55	6,911.25	47.81	112.96	121.45	0.48	-0.05	-23.55
7,009.00	1.54	182.51	7,005.23	45.63	112.75	120.15	0.46	0.43	-7.49
7,104.00	1.67	185.94	7,100.19	42.98	112.55	118.61	0.17	0.14	3.61
7,198.00	0.26	124.66	7,194.18	41.49	112.58	117.87	1.66	-1.50	-65.19
7,292.00	1.43	41.88	7,288.17	42.25	113.54	119.08	1.51	1.24	-88.06
7,387.00	1.62	38.99	7,383.13	44.17	115.18	121.48	0.22	0.20	-3.04
7,481.00	1.23	42.68	7,477.10	45.95	116.70	123.69	0.43	-0.41	3.93
7,575.00	1.39	37.58	7,571.08	47.59	118.08	125.72	0.21	0.17	-5.43
7,670.00	1.11	40.04	7,666.06	49.21	119.37	127.67	0.30	-0.29	2.59
7,764.00	1.25	49.04	7,760.04	50.58	120.73	129.54	0.25	0.15	9.57
7,859.00	0.88	70.10	7,855.02	51.51	122.20	131.27	0.56	-0.39	22.17
7,953.00	0.87	58.98	7,949.01	52.12	123.49	132.70	0.18	-0.01	-11.83
8,047.00	0.96	66.98	8,043.00	52.79	124.83	134.19	0.17	0.10	8.51
8,142.00	0.77	343.42	8,137.99	53.72	125.38	135.14	1.22	-0.20	-87.96
8,236.00	0.34	309.77	8,231.98	54.50	124.98	135.20	0.56	-0.46	-35.80
8,330.00	0.20	344.69	8,325.98	54.84	124.73	135.16	0.22	-0.15	37.15
8,425.00	0.17	282.46	8,420.98	55.03	124.54	135.10	0.20	-0.03	-65.51
8,519.00	0.45	155.72	8,514.98	54.72	124.56	134.95	0.60	0.30	-134.83
8,613.00	0.72	142.29	8,608.98	53.92	125.07	134.98	0.32	0.29	-14.29





## Survey Report



<b>Company:</b>	US ROCKIES REGION PLANNING	<b>Local Co-ordinate Reference:</b>	Well NBU 921-20B
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>TVD Reference:</b>	GL 4873 & KB 24 @ 4897.00ft (HP 318)
<b>Site:</b>	NBU 921-20B PAD	<b>MD Reference:</b>	GL 4873 & KB 24 @ 4897.00ft (HP 318)
<b>Well:</b>	NBU 921-20B	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Denver Sales

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,708.00	0.17	47.90	8,703.98	53.54	125.54	135.19	0.79	-0.58	-99.36
8,802.00	0.26	51.48	8,797.97	53.77	125.81	135.54	0.10	0.10	3.81
8,896.00	0.62	89.27	8,891.97	53.91	126.49	136.19	0.47	0.38	40.20
8,990.00	0.80	137.52	8,985.97	53.43	127.44	136.76	0.64	0.19	51.33
9,084.00	1.07	154.43	9,079.95	52.15	128.26	136.80	0.41	0.29	17.99
9,179.00	1.21	164.27	9,174.93	50.39	128.92	136.46	0.25	0.15	10.36
9,273.00	1.38	161.97	9,268.91	48.36	129.54	135.94	0.19	0.18	-2.45
9,368.00	0.17	268.14	9,363.90	47.26	129.75	135.56	1.51	-1.27	111.76
9,462.00	0.81	324.92	9,457.90	47.80	129.23	135.39	0.78	0.68	60.40
9,557.00	0.54	314.02	9,552.89	48.66	128.52	135.23	0.31	-0.28	-11.47
9,651.00	0.21	158.22	9,646.89	48.81	128.27	135.09	0.78	-0.35	-165.75
9,745.00	1.08	100.98	9,740.88	48.48	129.20	135.72	1.05	0.93	-60.89
9,839.00	1.23	92.72	9,834.86	48.27	131.08	137.21	0.24	0.16	-8.79
9,933.00	1.37	101.45	9,928.84	47.99	133.19	138.88	0.26	0.15	9.29
10,028.00	1.32	104.84	10,023.81	47.49	135.36	140.48	0.10	-0.05	3.57
10,122.00	1.07	109.75	10,117.79	46.92	137.23	141.79	0.29	-0.27	5.22
10,217.00	1.26	116.65	10,212.77	46.15	139.00	142.91	0.25	0.20	7.26
10,288.00	1.06	127.37	10,283.76	45.40	140.22	143.57	0.41	-0.28	15.10
LAST SDI MWD PRODUCTION SURVEY									
10,344.00	1.06	127.37	10,339.75	44.77	141.04	143.95	0.00	0.00	0.00
SDI PROJECTION TO TD									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
217.00	217.00	0.06	-0.30	FIRST SDI MWD SURFACE SURVEY
2,970.00	2,967.06	61.56	103.01	LAST SDI MWD SURFACE SURVEY

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_